TEXAS
STATE JOURNAL OF MEDICINE
Volume 47 Number 11 Austin, Texas, November, 1951

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President's Page

MEDICAL EDUCATION

Because medicine is a living art, medical education must always be a continuing process. From the time a person enters medical school until he retires from practice he must have the status of a student, ever alert to the evolution of medical science and practice. Postgraduate study is paramount, since it will demand more time and attention throughout the doctor's life than the medical school curriculum.

Such postgraduate study may be pursued in several different ways. The most readily available is medical literature, which frequently is neglected or put aside for the future. Attendance at staff meetings or medical societies is another phase of study. Recently postgraduate assemblies, organized on a regional or a national basis, have become popular. For years medical schools have presented refresher courses or seminars of varying length in practically every phase of medicine. By promoting such courses the medical schools simply have confirmed the fact that medical education is never complete.

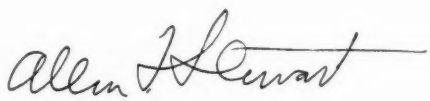
Any consideration of postgraduate education brings up the question of financing it. The limited funds available already find medical schools hard pressed to finance four years of undergraduate study, and limited enrollment is forced upon them. Postgraduate study is an extra burden. Such circumstances encourage some in the body politic and even in the medical profession to urge federal aid to medical education. The answer to the question of whether medical schools and medical students shall be subsidized by the federal government or whether their finances shall be secured elsewhere will determine in no small measure whether or not doctors shall maintain their independence in a free enterprise economy.

The public must be acquainted with the fact that to establish and maintain medical schools and to turn out doctors there are only three sources to be drawn upon: (1) private funds and foundations, (2) church organizations, and (3) taxation. The ever expanding system of graduated taxation has practically dried up the first two sources.

Therefore, to those who demand more doctors and more medical schools, the answer is larger appropriations and higher taxes through properly constituted legislative bodies at local or state levels. If this fact is clearly presented to the electorate, there will result an increasing satisfaction with the facilities already at hand.

The House of Delegates in its last session frowned upon the policy of financing postgraduate courses from federal funds and insisted that all doctors attending such courses pay their own way. It seemed illogical that many who shudder at the idea of socialized medicine should accept largess for attending courses which are beneficial to them, both professionally and financially. In recommending this position the House of Delegates assumed the responsibility of underwriting any deficit up to $2,500 for each medical school offering courses during the current year, the balance of the expense to be raised from tuition fees. The Council on Medical Education and Hospitals has been working diligently with the medical schools in shaping such courses, and the cooperation of the deans and faculty has been thrilling. The latest innovation is the presentation of courses through the telephone. This method, which has been proved successful by the dental societies, offers great possibilities in getting wide coverage for medical courses.

The present attitude toward postgraduate work is to emphasize its necessity and the responsibility of the individual doctor to procure training at his own expense. The emphasis is upon insisting on medical education, both undergraduate and postgraduate, without federal aid, which aid, of course, predicates intervention and supervision. Happily, the last Congress disapproved the idea when a bill calling for such federal aid was killed during the last few days of the session. If the states demonstrate that medical education can be secured by other means, the cry for federal subsidy will be stifled. Each physician can do his part to stave off federal subsidy by attending the postgraduate courses offered by the medical schools and supporting the educational activities of his professional societies.



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EDUCATING FOR GENERAL PRACTICE

Medical educators everywhere are reevaluating their curriculums and attempting to assure a steady graduation of physicians equipped and willing to choose general practice as a career. One of forty-two medical schools in the United States with programs specifically designed to stimulate interest in general practice, the University of Tennessee recently has established separate general practice clinics staffed by practicing "GP's." The Tennessee program is described in the Current Editorial Comment by Dr. Paul Williamson, director of the clinics, published in a nearby column.

Members of the medical profession for sometime have been aware of the need for channeling more physicians into general practice, especially in the rural areas. The public at large has berated the profession for becoming more and more specialized and less and less eager to provide good medical care in the smaller communities which cannot support groups of specialists. Knowing that the charge is based on fact and realizing the importance of placating the accusers, physicians at the same time recognize keenly the obstacles facing a young doctor who otherwise might be disposed to do general practice in a small town. As one general practitioner put it: (1) Teachers in medical schools are specialists, and their pupils naturally incline toward specialization. (2) The hours of work of the general practitioner usually are longer than those of the specialist. (3) Some recent graduates are reluctant to set up practice where they will have the complete responsibility of taking care of patients. (4) The financial burden of setting up an office for general practice with the proper laboratory and diagnostic equipment is prohibitive for many young doctors. Furthermore, the lack of cultural opportunities in small communities and the hesitancy

EDITOR'S NOTE: *An official from each of the three medical schools in Texas and several physicians doing general practice were invited to comment on Dr. Williamson's article. Chauncey D. Leake, Ph. D., vice-president of the University of Texas Medical Branch, Galveston; Dr. Warren T. Brown, associate dean of Baylor University College of Medicine, Houston; Dr. A. J. Gill, acting dean of the Southwestern Medical School of the University of Texas, Dallas; Dr. Leo J. Peters, Schulenburg; and Dr. Chester U. Callan, Rotan, generously contributed many of the observations on which this editorial is based.*

of wives of young doctors to settle in rural towns are contributing factors. Even so, the percentage of students who plan to become family doctors is increasing and had reached 47 per cent in a recent survey made by the Council on Medical Education and Hospitals of the American Medical Association.

Perhaps one of the most telling reasons for including general practitioners on the teaching faculty of medical schools grows out of the first point just mentioned. Every plant tends to become a little like the soil from which it obtains nourishment; an all-specialist faculty tends to turn out specialists, whereas a faculty containing general practitioners conceivably would turn out some general practitioners.

Even this argument has a counter argument, however. The specialized curriculum of the medical school has grown out of the rapid advancement of scientific methods in medicine and the accompanying super-specialization in practice. This fragmentation of the practice of medicine may merely be accentuated by establishment of sections on general practice in the medical school curriculum, making of general practice just another specialty and no longer the responsibility of every physician. If this philosophy is accepted, the solution lies not in setting up separate general practice divisions but rather in encouraging every instructor, regardless of his specialty, to focus the main interest of his student upon the whole person and the end result of treatment, even though the diagnostic procedures, the methods of therapy, and the type of disease for the moment call for a specialized point of view.

Another hindrance to establishing general practice departments is the failure of the Council on Medical Education and Hospitals of the American Medical Association thus far to define clearly the circumstances under which general practitioners may be incorporated in hospital teaching staffs where the services are organized along specialty lines in accordance with the standards of the Council.

An alternative to the general practice clinic plan of the University of Tennessee is the preceptorship program which the University of Kansas and the University of Wisconsin have used successfully and which the University of Texas Medical Branch is instituting this year in cooperation with the Texas Academy of General Practice. Fourth-year students will spend three months with preceptors chosen from a panel recommended by the Academy, go with them on house and hospital calls, and observe their methods of office practice.

Some believe that the answer lies in better coordinated internship and residency training. Others have proposed the inclusion in medical school classes of a greater proportion of small-town students who would be more inclined to return to rural districts to practice than their city-bred classmates.

Although the details of how best to introduce the medical student to general practice may differ, educators and physicians in private practice are performing a real service in their efforts to develop qualified general practitioners. If a young graduate with a sound knowledge of internal medicine and its application in pediatrics and geriatrics, an understanding of basic surgical techniques, a recognition of the fundamental concepts of psychiatry, and training in preventive medicine can be given the necessary economic boost to get established and then will learn to know his patients thoroughly as persons, he can successfully treat 80 per cent of the ailments of the typical family. One of the important functions of this physician, of course, will be to know when one of his patients needs a specialist. A general practitioner of this caliber cannot fail to have the respect of his colleagues and the love of his patients.

DEMOCRACY IN ACTION

Important links in the chain of command assuring representation for Texas physicians in the American Medical Association are the Texas delegates and alternate delegates to that body. As in other forms of democratic government, Texas doctors have only to voice their opinions through the constituent county and state medical societies of the A.M.A. to participate in guiding medical policies on the national level.

Delegates and their alternates are elected by the House of Delegates of the Texas Medical Association in accordance with the By-Laws of the A.M.A. The delegates as representatives of their individual county societies and as ex-officio members of the Executive Council become well versed in the official thinking of their Texas colleagues; they act to relay this thinking to the parent medical governing body. More than that, they strive to shape the destinies of the A.M.A. in conformity with the best opinions of Texas medical leaders. The Texas delegation in past years has wielded considerable power in the A.M.A. House of Delegates. For example, of six resolutions which it took to the legislative unit last December, all but one received favorable action.

In paying tribute to its delegates to the A.M.A. through biographical sketches, which appear in the Organization Section of this issue of the JOURNAL, the Texas Medical Association also recognizes the importance of its alternate delegates. These physicians attend meetings of the A.M.A. when possible, take assignments along with the regular delegates, appear before reference committees or wherever duty calls them, and in general help guide the measures in which the Texas delegation is interested through the channels necessary for action by the A.M.A. House of Delegates. If one of the delegates cannot function, an alternate serves in his stead.

AUXILIARY CONTRIBUTES TO BUILDING

"Where your treasure is, there will your heart be also" might be quoted in reverse to describe the Woman's Auxiliary to the Texas Medical Association. Long recognized as the cooperating partner of the Association, the Auxiliary year after year has built its program around the objectives and goals of the medical profession. Now, sizable financial contributions from the Auxiliary have been turned over to the Association for its projects, thus adding treasure to wholehearted interest.

After the annual meeting of the Woman's Auxiliary in May, a check for $1,417.74 was sent to the Association for use in its building program. This sum represented all in excess of $5,000 remaining in the Auxiliary's "Special Fund," the depository for the $1 per membership which the Association annually earmarks for the Auxiliary. A second check for $5,000 for the new Association building was transferred to the Association after the Auxiliary Executive Board meeting in September. A third contribution of $250 for use in carrying out the plans of the Council on Medical Education and Hospitals for a statewide telephone broadcast series was approved at the Executive Board meeting.

The physicians of Texas can be proud of the interest and enthusiasm of their wives in the work of their Association, and a genuinely felt "thank you" is due every Auxiliary member for the generosity of the past few months.

DUES FOR 1952 ACCEPTABLE NOW

Membership dues for 1952 for the Texas Medical Association and American Medical Association, both of which become due January 1, may be paid now. The state dues will total $50 for regular membership and the A.M.A. dues $25 for regular membership. Both sums are payable by individual members to the county society secretary, who should send them to the Executive Secretary of the Texas Medical Asso-

ciation. The A.M.A. dues in turn will be forwarded to the Secretary of the A.M.A.

The Executive Secretary has urged county societies to begin payment of dues early so that the necessary bookkeeping and acknowledgments can be handled smoothly and promptly. A county society secretary who has collected dues from a reasonable number of members should forward them to the Executive Secretary without waiting for a 100 per cent collection. It will expedite handling of dues if separate checks are made to the Texas Medical Association to cover state dues and to the American Medical Association to cover national dues, even though both checks should be sent to the state office. Lists of names and mailing addresses of members for whom dues are being paid should accompany each check.

Secretaries should make clear to members that the Texas Medical Association dues for 1952 for regular membership have been increased to a total of $50 (other categories of membership remain the same: intern and resident $4, honorary $4, military $1, and emeritus none). Likewise, it should be pointed out that the American Medical Association will accept dues for 1952 only from physicians who were not eligible for membership in the A.M.A. in 1950 or whose 1950 A.M.A. dues have been paid. It is not necessary that a former member of the A.M.A. pay dues for 1951 in order to become reinstated in 1952. Fellowship dues of $5 should be sent directly from individual physicians to the American Medical Association; such dues are in addition to the $25 membership dues payable through the state office.

County society secretaries who have not billed members of their organizations for 1952 are urged to do so promptly. New membership cards, the periodicals for which subscription is included in the dues, participation in annual sessions, and the other privileges incident to membership in the state and national medical organizations are dependent on payment of dues for the new membership year, and these privileges can be continued uninterrupted only if dues come in as they should.

CURRENT EDITORIAL COMMENT

THE GENERAL PRACTITIONER ON THE MEDICAL SCHOOL FACULTY

An active visiting staff of general practitioners has been brought into the medical center at the University of Tennessee for the first time in many years. The purpose is to teach the art of general practice to the medical student.

Such a staff poses immediately the problem of where in the medical curriculum such instruction should be placed and what objectives should be sought. It is hardly conceivable that the general practitioner could teach more about the scientific part of any specialty than the specialty clinics. Equally, it would be inappropriate to instruct the student in the practice of general medicine until he had accumulated a good basic knowledge. Reasoning from these two premises, it would seem that only students in their final year of medical school should be candidates for general practice training. Thus, our program allows only students in their final quarter before graduation to enter the general practice clinics.

The staff of these clinics is made up entirely of general practitioners from the area, both from the city and from surrounding rural practices. In forming the staff, it was recognized that the average general practitioner has less free time than the specialist, and it was not known whether general practitioners could take time to associate with the medical school. To

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This department of the JOURNAL *presents editorial comments on current items pertaining to the science, art, and practice of medicine, contributed by members of the Texas Medical Association and scientists closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the Texas Medical Association to submit such discussions for this department. The discussions should not be more than 500 words in length.*

date, applications for staff positions have vastly outnumbered available openings.

In determining the limits of general practice instruction the following goals have been tabulated:

1. To teach coordination of the knowledge obtained in the specialty clinics.
2. To teach the art of medicine.
3. To define the capabilities and limitations of the good general practitioner.
4. To give students actual experience in the practice of medicine.

Nowhere in the average medical school curriculum has there been a clinic in which the general run of patients are seen without previous selection. The student has been allowed to form an opinion on only one aspect of any medical problem. In the general practice of medicine the physician must consider the patient as an entity, not the disease as an entity. General practitioners, who every day must consider the whole patient, are the logical choice to supervise students while they learn this aspect of medicine.

The art of medicine has come in for much discussion but little concrete teaching. More "human problems" are brought to the family physician than to any other practitioner, and he should be the outstanding teacher of such arts. However, the indefiniteness of this art of medicine makes it impossible at present to organize a definitive teaching program. Our work is experimental, but it is hoped that students will gain some insight from their association with good general practitioners and from the observation of high-quality general practice.

The endless argument over the field of competence of the general practitioner probably never will be settled. Rightly, each physician has his own limitations and should not go beyond them, yet an arbitrary standard does not fit all practitioners. The general practice clinics will be equipped to do all common office procedures, and it is believed each student will begin to recognize his own limitations. First, for example, an electrocardiograph will be available. If a student wishes to try his hand at electrocardiographic interpretation, he may take a tracing on his own patients, but his interpretation will be subject to review. Second, each student will have the opportunity of observing the self-imposed limitations of the general practitioners on the visiting staff.

American medical students unquestionably get the finest scientific education in the world, but it is amazing how little they know about the actualities of general practice. It is hoped that association with active general practitioners will do much to further their knowledge and to persuade more young men to enter this field. Furthermore, the staff of general practitioners will have ample opportunity to demonstrate that high grade medical care is within the range of the well educated and experienced general physician.

PAUL WILLIAMSON, M. D., Director,
General Practice Clinics,
University of Tennessee,
Memphis, Tennessee.

Academy of Obstetrics and Gynecology Formed

The National Federation of Obstetric-Gynecologic Societies has reconstituted itself as the American Academy of Obstetrics and Gynecology. The objects of the Academy include "fostering and stimulating interest in obstetrics and gynecology and all aspects of the work for the welfare of women which properly come within the scope of obstetrics and gynecology."

The first business meeting will be held at the time of the meeting of the American Congress on Obstetrics and Gynecology in Cincinnati, March 31 through April 4, and the first annual clinical meeting in Chicago during the winter of 1952-1953. Further information about the Academy, including applications for fellowship, may be obtained from the Secretary's office, 116 South Michigan Avenue, Chicago 3.

Antihistamines Help Dysmenorrhea

Relief of severe dysmenorrhea by administration of antihistamines has been noted by Dr. Cluny Macpherson in the May, 1951, issue of the *Canadian Medical Association Journal*. Women accustomed to suffering from disabling dysmenorrhea who take one antihistamine pill every four hours for the twenty-four hours immediately preceding menstruation in most instances have found relief for the entire menstrual period. Although a patient may receive no benefit from one antihistamine, another may prove helpful.

ORIGINAL ARTICLES

CONGENITAL LESIONS OF THE ALIMENTARY TRACT IN INFANTS AND CHILDREN

Personal Cases of Surgical Interest

RICHARD JOSEPH WHITE, M.D., Fort Worth, Texas

THE most frequent congenital surgical condition which I have observed in children is hypertrophic pyloric stenosis. I have operated on about 100 babies with this defect. There were 2 deaths early in the series but none in the last 90 cases.

The picture in pyloric stenosis is classic and the condition is easily diagnosed. The baby, usually male, seems normal at birth; from about five or six days to as late as three weeks after birth he begins to vomit occasionally. The vomiting becomes more frequent and forceful and finally is projectile, the vomitus being thrown several feet, partly through the nose. There is no bile in the vomitus.

If the baby is watched closely after a feeding, contraction waves will be seen emerging from beneath the margins of the lower ribs on the left and passing across the abdomen to the right and slightly downward to disappear in the region of the pylorus. Often two and occasionally three waves are seen at once. With patience, in most cases a small hard tumor mass can be felt in the right portion of the abdomen slightly above the level of the umbilicus. The baby rapidly loses weight; the skin becomes wrinkled and the stools and urine scanty. Roentgenograms are rarely needed for diagnosis but when done show a high grade pyloric obstruction.

After from twenty-four to forty-eight hours' preparation by the administration of proper clyses, the Ramstedt operation with a longitudinal incision of the greatly hypertrophied pyloric musculature is done and the baby rapidly recovers. I know of no surgical operation which gives so great a reward for so little effort.

INTESTINAL ANOMALIES

Far different is congenital atresia of the small bowel. I have operated on 3 patients with congenital atresias of the duodenum, all of whom died. The prognosis of 2 for all practical purposes was hopeless because of the minute size of the upper portion of the small bowel. One had a fairly large small bowel, and I made what I hoped might be an adequate and functioning anterior gastroenterostomy. However, a leak in the suture line occurred, perhaps from insufficient turning in of the peritoneal coats for fear of producing obstruction and death from peritonitis.

Atresias lower in the small bowel are worse. I have operated on several and in every case the enormously distended blind upper end and the minute, angleworm-sized gut below have made a functioning anastomosis impossible. In each instance I have injected mineral oil into the lower part of the intestine through a fine hypodermic needle and made a two layer anastomosis with 0000 catgut and 0000 silk. In the last case the enlarged upper portion was incised and it was demonstrated that a fine catheter could be fed into the lower part of the gut through the anastomosis. However, none of the anastomoses have functioned.

Heretofore an enterostomy in the upper loop has always hastened death. Recently, a California surgeon reported doing an enterostomy with a catheter, pulling out the very small lower gut, threading a fine catheter into it, and feeding as much of the upper bowel drainage as possible into the lower bowel with a syringe; meanwhile supportive clyses and transfusions were given. Two babies survived and it was possible later to make an anastomosis. This is about the first ray of hope for these tragic patients.

There is a condition produced by malrotation of the intestine, with only a rudimentary attachment of the mesentery with an undescended cecum attached by a broad band of fibrous tissue to the lateral abdominal wall in the right upper quadrant. Often there is a volvulus with two or more clockwise turns of most of the intestine about the narrow mesenteric pedicle. The duodenum instead of passing under the colon and then to the normal termination at the ligament of Treitz passes directly downward into the right lower quadrant to merge without landmark with the jejunum. The symptoms are those of intestinal obstruction with bile in the vomitus. Roentgenographic studies usually show a greatly distended duodenum.

At surgery, unless this condition is thought of, a most confusing picture presents. Only small intestine

Read before the Section on Surgery, Texas Medical Association, Annual Session, Galveston, May 1, 1951.

is seen, tragically gangrenous in 2 of the cases I have encountered. This small intestine must be lifted out of the abdomen; then the unattached mesentery may be recognized, the volvulus untwisted counterclockwise, the broad band from the cecum to the right upper abdominal wall across the duodenum divided, and the cecum allowed to drift to the left side of the abdominal cavity. I have had 1 patient whom this operative procedure relieved. Two others, one mine and one whom I saw in consultation, had massive gangrene of the small bowel and did not survive. If intestinal obstruction is promptly recognized and such patients are referred to a surgeon familiar with this condition, they should nearly all recover. If the volvulus is merely untwisted and the band from the cecum not cut, the volvulus will almost certainly recur.

I have seen 2 examples of a full thickness defect in the abdominal wall with a prolapse of most of the intestine externally. The first such patient was inoperable because of total atresia of the colon. The second had a complete circular defect in the abdominal wall about 2 inches in diameter just below and to the right of the cord, with prolapse of a great quantity of small bowel and part of the transverse colon externally. The bowel was congested, edematous, and purplish but normally developed.

The edges of the ring were incised upward and downward. The cord stump was excised and the abdominal wall vigorously stretched manually. The intestine became pink as soon as the constriction was released. To my surprise, by manipulation the intestine could be replaced and the abdominal wall closed in layers. When the drapes were removed, a great quantity of meconium was seen to have been extruded from the anus, which doubtless made replacement simpler.

Intussusception in young children ordinarily is not due to a congenital defect but I have seen an example in a 16 month old girl with a submucous leiomyoma of the small intestine which was the leading point of a small bowel intussusception, in contrast with the usual mucosal polyp seen in adults. The obstruction was two days old when I saw the patient. The child was very ill, had vomited many times, had a large palpable mass in the midabdomen, but had had no bloody stools. A sudden, severe drop in the red blood cell count and hemoglobin from massive hemorrhage into the bowel above the point of obstruction was noticeable. Resection was done. A rounded polyp, microscopically leiomyoma, was at the head of the intussusception. Convalescence was stormy but the child survived.

I have had 6 patients with atresia of the anus, 5 of whom survived. One was moribund at operation. Two had good results and 2, one a female and the other a male, had the cloaca type of deformity with a communication between the bladder and the rectum with urine and feces being discharged from the rectum. Both of these latter patients were charity cases and have disappeared. It may be possible later for someone to close the rectovesical fistulas. In 5 patients the rectum was accessible from below. A sixth patient with a fairly large sinus opening through the lower posterior vaginal wall who was seen recently had to have a colostomy at 6 months of age because of repeated massive fecal impactions. An attempt at reconstruction of the vaginal wall will be made when the child is older.

In the case of rectums that are too high to bring down, Norris has recently advocated an abdominoperineal type of freeing of the rectum, of course without dividing the vessels, bringing it down to the perineum. Wangensteen's valuable suggestion of taking roentgenograms of these infants held up by their feet to see if gas can be seen in the rectal pouch may be misleading. In one instance in which such roentgenograms were made only six hours after birth, an excellent radiologist reported probable congenital absence of the rectum. The rectum was easily located and brought down through a perineal incision. The gas had not had time to make its way through the thick meconium in the intestinal tract.

I have seen 2 cases of teratoma of the sacral region. Potts and Riker in reporting 7 cases stated that less than 100 have been reported. They said such tumors are usually lobulated tissue masses with cystic and solid areas and may contain malformed tissues resembling any structure in the body. The most common are epithelium, connective tissue, ganglion cells, intestinal mucosa, bone, and cartilage. A fair proportion are malignant.

The first case of teratoma which I saw was in a newborn infant and was of formidable size. It was removed and the sphincter ani left intact; the patient, now a woman, is well. The second tumor, much smaller than the first, was seen in a 3 year old girl; excision was a comparatively simple surgical problem.

I have seen one example of cystic lymphangioma of the gastrocolic omentum which presented a striking picture. A 15 month old girl had an irregular, somewhat nodular swelling in the upper part of the abdomen. Gastrointestinal and urologic studies were indeterminate. The tentative diagnosis was mesenteric cyst. It was possible to dissect out the tumor completely and the child recovered.

ESOPHAGEAL AND DIAPHRAGMATIC LESIONS

I have seen 3 cases of congenital atresia of the esophagus with tracheo-esophageal fistula. One such patient was seen years ago. Three years ago I operated on a 2 day old baby with this condition and he

is living and perfectly well. No patient with this defect had survived before 1943. I operated on another patient, a premature baby weighing a little more than 4 pounds. The segments were too far apart to do a direct anastomosis and the baby did not survive.

Congenital atresia of the esophagus can be easily recognized. The baby drools saliva and chokes immediately when he tries to take a feeding. A catheter passed into the esophagus meets an obstruction and a few cubic centimeters of Lipiodol instilled through the catheter with the infant upright and a roentgenogram demonstrates a blind upper segment. Roentgenologic studies of the abdomen show air in the intestine if a fistula is present but none if it is absent.

If these babies are operated on through the chest, the fistula exposed and ligated, and end to end anastomosis done, a large number can be saved. A few in whom direct anastomosis could not be done have been rescued by ligating the lower segment, pulling the upper segment out in the neck, doing a gastrostomy, and reconstructing an esophagus by a skin tube or segment of ileum. More recently Dr. Sweet has freed the stomach, pulled it up into the chest, and anastomosed it directly to the upper esophageal segment. Congenital atresia of the esophagus is not too rare a condition and is a striking example of the surgical progress which now permits the rescue of many infants in whom the prognosis formerly was considered hopeless.

I have had one tragic experience with congenital hernia of the diaphragm. The child was several months old and the left part of the chest contained most of the stomach, much small intestine, a considerable amount of colon, and the spleen. Through an abdominal incision the intestines were pulled out of the chest and laid on the abdomen. Cyclopropane anesthesia was being used at my request by an expert anesthetist. The edges of the defect were partially freshened and an easy closure was in prospect when the heart became irregular and stopped. With manual massage it started for a short while and then stopped again. In spite of prolonged massage and the direct injection of adrenalin, which in the light of our present knowledge was a mistake, the child died. This is the only death on the operating table in my entire experience, although of course I have had many scares. Cases of congenital hernia of the diaphragm are often emergencies and such patients should be operated on promptly. Surgeons who have had a large amount of experience with this type of operation report a reasonably low mortality.

DEFECTS OF BILE DUCTS

I have encountered one notable example of a remarkable and little known condition, congenital cystic dilatation of the common bile duct. The usual case is manifested by a tumor in the right upper quadrant of the abdomen, pain, and jaundice. Most of the patients reported on have been seen in childhood or early adult life. The defect is rarely diagnosed preoperatively. It consists of great dilatation of the common bile duct, occasionally, as in the case I saw, to fantastic proportions with a normal segment of common duct without demonstrable obstruction below the dilatation. Treatment is anastomosis of the cyst to the duodenum laterally.

An 18 month old Negro boy had a large cystic swelling occupying all of the right upper part of the abdomen and extending downward to the iliac crest and far past the midline to the left. Intravenous pyelograms revealed normal kidneys. There was no jaundice or pain. At a staff conference I suggested the diagnosis congenital cystic dilatation of the common bile duct but thought it hard to maintain because of the size of the tumor, much larger than any I had ever read of.

On surgical exposure a huge cyst, thick walled and fibrous, retroperitoneal, and displacing the colon far to the left, was observed. A normal segment of the common duct, probed from inside the cyst, was demonstrated to leave its lower pole and enter the duodenum. Upon evacuation and measurement in the suction bottle, the cyst was observed to contain 2,500 cc. of bile stained fluid. Lateral anastomosis between the cyst and duodenum was done. The child ran a febrile course for about two weeks, probably from cholangitis, then recovered and remained well. The mass disappeared. It is important to recognize the tumor after it is exposed surgically. Unless the diagnosis is made correctly, proper treatment cannot be given.

In my practice there has been one example of congenital atresia of the bile ducts, a defect which is not too rare. The baby is usually jaundiced at birth and the jaundice slowly and steadily deepens. The stools are putty-like. The liver is enlarged and in the patient whom I saw was obviously nodular and cirrhotic. At 2 or 3 months of age these children should have exploratory surgery. In 4 out of 5 instances, as was true in my case, no patent gallbladder, cystic duct, or hepatic ducts will be found. However, Ladd and Gross reported 9 cases in 45 in which it was possible to anastomose a patent duct or the gallbladder to the duodenum with several full recoveries. The patients with hopeless lesions often live several months, occasionally as long as a year.

UMBILICAL DEFECTS

In my practice there have been 4 instances of fairly large omphaloceles with a hernia into the cord, the intestine being seen through a transparent peritoneum and Wharton's jelly. Fortunately all of the intestine

which had herniated could be reduced and the wound closed primarily. In the larger omphaloceles that sometimes contain liver and cannot be closed, Gross advises incising the skin about the rim of the defect, undermining the skin widely, and closing it over the sac. Many months later when the abdomen has stretched and grown, a proper repair may be done.

A striking and to me unexplained anomaly of the umbilicus is illustrated in this next case. The parents knew that something was unusual about the navel at birth. When the child was examined by the physician at 9 months of age, vivid red, raspberry-like tissue represented a granuloma pyogenicum which the parents said had been present since shortly after birth. There was a truncated, conelike protrusion of the tissue about the umbilicus beneath the granuloma. On excision two thick cordlike structures on the lower and lateral surfaces of this tissue which probably represented obliterated hypogastric arteries were seen. A thick walled muscular sac lined with a smooth membrane resembling peritoneum contained a little clear fluid. It measured 2 cm. across at its summit and communicated with the peritoneal cavity through a .5 cm. opening. Histologically, its lining resembled bladder epithelium. There was no trace of a properitoneal sinus resembling a urachus or any fistulous communication with the small bowel. Just what the lesion represented I do not know but excision and repair resulted in cure.

I have seen a number of other rare and interesting conditions. You will recall that Richard III, in Shakespeare's language, cursed his fate that he was "brought into this world scarce half made up." Many children with congenital lesions of the alimentary tract can be rescued by timely surgery.

SUMMARY

This paper includes a discussion of pyloric stenosis, intestinal atresias, malrotations of the intestine, abdominal wall defects, intussusception, atresia of the anus, sacral teratomas, cystic lymphangioma of the mesocolon, congenital atresia of the esophagus, diaphragmatic hernia, congenital cystic dilatation of the common bile duct, congenital atresia of the bile ducts, omphaloceles, and an unusual anomaly of the umbilicus.

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ABSTRACT OF DISCUSSION

DR. J. PEYTON BARNES, Houston: Dr. White has presented an impressive list of congenital lesions and most assuredly deserves praise for his results. My own experience has been far more limited, both as to the number and variety of cases.

In pyloric stenosis I have only rarely been able to feel the "olive-shaped tumor" and cannot attach much significance to this finding as a diagnostic sign. The other signs and symptoms mentioned are reliable and have been well described. A right rectus incision is satisfactory; the incision is carried down through the anterior rectus sheath only, whereupon the rectus muscle is retracted well laterally and the posterior sheath incised transversely. This leaves a strong abdominal wall without danger of rupture and gives good exposure.

Four patients with omphalocele have been operated on by me in the past nine years. One had already had the membrane ruptured and died two weeks later of peritonitis. Another, who had the entire liver outside the abdomen in an unruptured sac, had a successful repair but died six months later from a congenital heart lesion which became progressively worse; this baby also had three half-formed vertebrae. A third, a baby girl who now is 9 years of age, was operated on by the method described as new by Robert Gross about a year ago. The membrane was carefully preserved intact with the umbilical cord attached at its center. The skin was separated from it all the way around and for a considerable distance onto the abdominal wall and closed in a transverse direction, simply because that was the best way to do it at the time. The umbilical cord was brought out through the center of the incision. No attempt was made to dissect the layers upward or to approximate fascia or muscle. The defect was round, about 2.5 inches in diameter, and right in the center of the abdominal wall. This patient now has relatively little weakness, and as she grows older and taller the recti muscles seem to be coming closer together. The fourth case was a hopeless one, with the sac ruptured and the small bowel ending in a blind end, plus atresia of the colon; the patient lived only a short while.

Imperforate anus is another intriguing problem. If the blind end of colon is fairly close to the perineal surface, the results should be good. If the incision can be planned so that the colon will be brought out approximately through the middle of the external sphincter, future control probably will be better. With the baby in the lithotomy position and surgically prepared, the anesthesia is allowed to become rather light. If the midline is carefully pricked with a needle, a small dimple will be formed by the contracture of the underlying external sphincter; this marks the spot where the colon should emerge. Care should be taken to bring out a little excess colon, if possible, to allow for retraction. Dilatation of the newly formed anus can be done without trauma if a Foley catheter is used, employing the air bag for the dilating force.

In 1 case in which contact with the parents was lost some eight months after the primary operation, adequate dilatation was not done. This baby was brought back a year later with a huge fecal mass in the sigmoid, which was removed by open operation. At the same time thorough dilatation was done, and two years later the anal opening was normal and sphincteric control good.

I have had no experience with several of the conditions so ably handled by Dr. White but would like to mention one which he did not, namely, Meckel's diverticulum. This entity is mentioned merely to stress the danger inherent in its removal in children or adults, but particularly in infants. In these latter the caliber of the small bowel is very small, and the slightest bit of excessive inversion after this pro-

cedure can result in complete obstruction, with all that is implied. One must plan the removal of this structure most carefully and know full well that its safe removal is much more difficult technically than first appears. I have seen at least 2 cases of obstruction recently from this single cause and therefore feel justified in emphasizing this one point.

PRECANCEROUS LESIONS OF THE GASTROINTESTINAL TRACT

GEORGE M. UNDERWOOD, M.D., Dallas, Texas

THE Federal Security Agency[12] charged 195,432 deaths in 1948 to "cancer and other malignant tumors." The United States Bureau of the Census has estimated that "malignant conditions of the digestive organs accounted for 46% of all cancer deaths." Therefore, in 1948, approximately 90,000 deaths were caused by gastrointestinal malignancy. Malignancy was second as a cause of death, and for this reason it is not wise to separate completely the discussion of premalignancy from that of malignancy.

ESOPHAGUS

Pack and Livingston[15] stated that if cancer of the esophagus were correctly diagnosed, the incidence would increase from the recorded 1.8 per cent to 4 or 5 per cent. They regard it as more frequent than cancer of the lip, tongue, larynx, or kidney and more common than all malignant tumors of bone. Hoffman, quoted by Bockus,[5] estimated that there are 2,000 deaths annually in the United States from carcinoma of the esophagus. As to age incidence, the fifth and sixth decades predominate. As to sex, males predominate except in certain countries.

Bockus[4] was of the opinion that malignant lesions of the esophagus may have their origin in certain benign tumors, even though such tumors do not produce symptoms. The common benign tumors are polyps, lipomas, myomas, and fibromyomas. The role of peptic ulcer of the esophagus as a premalignant factor seems uncertain and unimportant.

Esophagitis may be regarded as a premalignant lesion. The custom of Chinese men of eating before the women and therefore of consuming much hotter tea and rice may be a factor in the 80 per cent incidence of cancer of the esophagus among men in that country. Certain groups of Scottish women who drink large quantities of very hot tea have an incidence of cancer of the esophagus twice as great as men of the same community. Benedict and Sweet,[2] in analyzing a series of 60 cases of benign stricture of the esophagus, asserted that esophagitis is a common cause of stricture and that an occasional carcinoma develops in association with stricture. Regurgitation of acid gastric juice seemed to be an important factor in the causation of esophagitis. Esophagitis, then, either thermal or chemical, is a precancerous lesion. Cancer is rarely associated with cardiospasm or syphilis of the esophagus.

The earliest recognizable symptoms of an esophageal lesion are indefinite, intermittent, and unimpressive such as (1) "food sticking" temporarily, (2) a queer feeling upon swallowing, (3) a vague sensation of "cramping in the neck," or (4) a feeling of a "lump" arising in the throat.[4] Dysphagia, regurgitation, and bleeding are late symptoms. In the presence of any of these symptoms, the physician's interest in the esophagus should become acute. It is his responsibility to prove a precancerous or cancerous lesion is not present; to do this, a competent radiologic examination is needed first. By this method alone the diagnosis of 75 per cent or more of lesions can be made. Esophagoscopic examination also must be made; with it, biopsy specimens of many lesions may be obtained, whereupon an unqualified diagnosis can be made. The combined diagnostic efficiency of radiologic and esophagoscopic examination and biopsy may attain 95 per cent.

STOMACH

Cancer of the stomach was regarded by Osler as hopeless. Apparently, he was acquainted with the lesions only in its advanced stage. McCarty[14] has impressed the profession with the importance of recognizing early cancerous lesions. His discussion of the ulcer-cancer relationship is a worthy contribution.

The premalignant lesions of the stomach are benign tumors such as adenomatous polyps, leiomyomas, neurolemmas, benign ulcer, and gastritis. Wangensteen[20] observed 15 polyps among 464 patients with achlorhydria. He did not advise immediate removal but roentgenologic and gastroscopic examinations three or four times each year. Carey[8] reported in detail the gastroscopic study of 71 cases of gastric polyps. Roentgenologic and gastroscopic observations complemented each other, but the gastroscopic appearance revealed the more accurate information as to the nature of the polyps. Carey diagnosed 5 polyps as ma-

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lignant by gastroscopy. They were removed surgically and the diagnosis confirmed by pathologic examination. Histamine-fast achlorhydria was present in all 5 and atrophic gastritis in 4.

Gastric ulcers should be considered malignant until healed. Occasionally, a small carcinomatous ulcer apparently will heal initially with medical management. Eusterman[11] called attention to this phenomena several years ago. Smith and Jordan[18] believed that all recurrent gastric ulcers and those which fail to heal after from six to eight weeks of intensive medical management should be resected on suspicion of malignancy. Palmer, in discussing their paper, expressed the opinion that if a diagnosis of benign gastric ulcer is to be accepted, histamine-fast achlorhydria should be excluded. Wangensteen[20] estimated that a small percentage of benign gastric ulcers ultimately become malignant. He mentioned 2 patients treated by gastroenterostomy, both of whom later had malignancies, one after eight years, the other after twenty-five years.

Gastritis also may prove precancerous, especially atrophic gastritis. The Hollanders have a general incidence of cancer about the same as the British. However, they eat food 60 C. or hotter, smoke excessively, and are indulgent toward oral sepsis, and the incidence of cancer of the stomach is two and one-half times greater among them than among the British. Atrophic gastritis with or without pernicious anemia is considered by many to be a potentially premalignant lesion; however, Stout[19] and others are skeptical of this theory. Comfort[9] recently suggested that subacidity or an associated defect or deficiency may constitute a precancerous state. The significance of gastritis resulting from alcohol, allergy, and infections is not certain.

The role of heredity as a precancerous influence cannot be ignored. For instance, Napoleon, who is known to have died of cancer of the stomach, was preceded in death by his father who had cancer. He also had two sisters and one brother who died of cancer. A saying attributed to one of the Mayos is that "cancer never develops in a healthy stomach."

Age is obviously an important factor in predisposing to malignancy. Stout[19] indicated that, in his experience, age is accompanied by a definite increase in the incidence of atrophic gastritis.

If premalignant gastric lesions produce symptoms, these symptoms may logically fall into one or more groups: (1) symptoms indicating pyloric narrowing, (2) the peptic ulcer syndrome, (3) hematemesis or melena, (4) symptoms suggesting a lesion of the lower end of the esophagus, and (5) gastric dyspepsia during a long period. Patients with such symptomatology should be examined as carefully as possible. As in lesions of the esophagus in which cancer is suspected, radiologic examination comes first. Gastroscopic examination, gastric analysis, and examination of the stool for occult blood should be included. The blood must also be examined. Biopsy of selected gastric cases has been reported by Benedict,[13] who used the operating gastroscope.

Perhaps gastric diverticula should be mentioned. Brown, Bissonnette, and Albee[6] recently reviewed the literature and reported 30 cases. The condition is rare. The cardia is the most common site in from 74 to 90 per cent of cases. Symptoms are not characteristic but hemorrhage is common. The diagnosis usually is made by radiologic examination. Carcinoma probably does not develop in diverticula of the cardia but diverticula in other portions of the stomach may be associated with malignant disease. Hence, exploratory surgery is indicated.

Bockus[4] is certain that a gastric lesion should be considered "potentially cancerous" if any of the following are present: (1) the meniscus sign, (2) a lesion extending from the greater curvature of the stomach, and (3) a subtraction defect associated with ulcer. With the coexistence of achlorhydria such patients should undergo exploratory surgery. The important points in the management of a gastric complaint therefore are (1) the clinician should be on the lookout for any symptom which suggests an organic lesion, (2) the patient must be persuaded to have earlier roentgenologic, gastroscopic, and clinical studies, and (3) precancerous lesions must be observed or subjected to earlier surgical exploration and removal.

SMALL INTESTINE

Cancer of the duodenum is known to be exceedingly rare, so rare in fact that I believe the discussion of its precancerous lesions may be omitted. It is true that the duodenum occasionally is invaded secondarily by carcinoma of the pancreas and biliary tract. The remaining portions of the small intestine, namely, the jejunum and ileum, contribute a small percentage of cancerous lesions of the gastrointestinal tract, 1 per cent or less.

The commonest malignant lesions of the small intestine are (1) adenocarcinomas, usually of the constricting or napkin ring type, and (2) carcinoids or argentaffine tumors. Masson defined carcinoids as "tumors derived from chromaffin cells of the crypts of Lieberkühn" and suggested the term "argentaffine tumor" because of the ability of these cells to reduce solutions of ammoniacal silver. They are not highly malignant; only about 25 per cent metastasize. Argentaffine tumors are being encountered more frequently and perhaps should be sought for more diligently. Steele and his associates[7] recently reported 11 cases and gave an excellent review of the subject.

Perhaps it should simply be emphasized that phys-

icians should be on the lookout for polyps of the small intestine, single or multiple. Meckel's diverticulum should be kept in mind and when recognized should be removed. In general, small intestine patterns should be studied more closely by radiologic examination.

COLON

Much that has been said concerning the precancerous lesions of the esophagus and stomach is applicable to the colon. A great deal of clinical alertness will be required to increase the percentage of resectable lesions discovered. Estes[10] stated that with earlier diagnoses and earlier operations he was able to increase the percentage of resectability among his cases of carcinoma of the colon from 45 to 85 per cent in two and a half years.

Bargen[1] and his associates gave a magnificent symposium on polyps of the colon and rectum in 1940 and presented proof of the precancerous nature of these lesions. They recommended fulguration of polyps within reach of the sigmoidoscope and surgical removal of others.

Sauer and Bargen[17] in an amazing paper called attention to the astounding incidence of carcinoma of the colon in patients afflicted with chronic ulcerative colitis ten years or longer. Johnson and Orr[13] also observed malignancy in the wake of chronic ulcerative colitis. My own experience with perhaps less than a dozen cases included 1 patient with extensive secondary polyposis. Because of severe repeated hemorrhage colectomy was performed; otherwise, I feel sure that the patient would have been a good candidate for carcinoma.

Rosser[16] has urged the importance of removing as far as possible the benign lesions of the anorectal area in the prevention of cancer. I do not believe the idea that benign lesions such as hemorrhoids, fissures, fistulas, and polyps are a definite cancer hazard has been sufficiently appreciated.

Squamous cell carcinoma of the anorectal area deserves mention. This lesion was described excellently by Kerr. A striking feature of squamous cell carcinoma is that 62 per cent of the cases are in women, whereas, in adenocarcinoma of the rectum, 65 per cent of lesions are in men. Sixty-five per cent of patients with squamous cell carcinoma complained of pain and bleeding and had a palpable nodule.

Jackman reported his experience with a group of submucosal nodules of the rectum. These nodules are frequently discovered by a digital rectal examination. Most of them are sclerotic masses, secondary to injection of sclerosing solutions for hemorrhoids, and practically all are benign. However, Jackman observed 6 malignancies among 87 cases. Hence, these nodules should be removed or carefully observed.

Any lesion which might be associated with cancer should be carefully considered. Patients with diverticulosis, for instance, should be observed regularly even though the association of the condition with cancer is not impressive. Rowe recently mentioned a small series of cases of diverticulitis complicated by carcinoma of the colon. The patient with an irritable colon should be examined carefully at regular intervals.

As to precancerous symptomatology, any lesion which alters the function of the colon may alter the bowel habit and should immediately arouse suspicion. Such a lesion may produce back pressure on the cecum, probably by means of spasm and distention. Frequently this condition is first interpreted as appendicitis. Further study, however, will reveal that typical symptoms of appendicitis are absent. Abdominal discomfort may be poorly defined. The early symptoms are indefinite and usually are not described as actual pain or cramping. Merely slight distention and slight alteration in bowel function may occur or the patient may notice the necessity for altering his diet, omitting certain vegetables containing residue. Alternating constipation and diarrhea are late symptoms. There may be slight bleeding, indefinite rectal discomfort, or discomfort referred to the sacral segments of the spine.

Digitorectal examination, preferably rectopelvic bimanual examination, is important. Sigmoidoscopic examination should never be omitted and when in doubt should be repeated. A biopsy specimen should be obtained if possible. Roentgen examination by means of a double contrast barium enema is essential for lesions above the rectosigmoid area. All of these examinations should be repeated without hesitation when a lesion is suspected but not immediately found. Occult blood in the stool should be sought; gross blood and mucus, when present, should stimulate the clinician to make an extremely careful examination.

In lesions of the colon and rectum heredity is important; 25 per cent of patients with colonic cancer give a history of cancer in the family.

Wangensteen[20] suggested the establishment of cancer detection clinics and such a clinic is in operation in Minneapolis to which the cancer prone or those with symptoms may go for examination. Especially should patients have a "careful interrogation... hemoglobin determinations, a study of the stool for blood, an assay of the gastric juice for free hydrochloric acid, roentgen studies and gastroscopic studies in suitable cases...."[20] Obviously a certain number of doctors with special training are required in such clinics. North Carolina recently has announced a statewide cancer detection program with uniform distribution of cancer detection centers. No doubt other states have similar programs.

CONCLUSIONS

Esophagitis is probably the most important precancerous lesion of the esophagus. Symptoms other than the most transient merit radiologic and esophagoscopic examinations, combined with biopsy if possible.

Gastric polyps may become malignant. Gastroscopic examination is helpful in determining their status. Radiologic, gastroscopic, and clinical reexaminations are essential when presumed benign ulcers "heal."

Achlorhydria should be recognized when attempting to decide if small ulcers of the stomach are benign. Achlorhydria often is associated with gastric polyps and with atrophic gastritis. The incidence of achlorhydria and atrophic gastritis may increase with age.

Among precancerous lesions of the colon, polyps in general and chronic ulcerative colitis in particular seem to offer the greatest potential danger. Certain benign anal lesions should be removed or carefully observed.

Cancer detection centers are now active in certain sections. They are invaluable, not only because precancerous lesions or cancers may be detected therein but also because they have an educational value for both the profession and the laity.

In the final analysis, individual physicians should apply their knowledge zealously in such a way that the patient with a precancerous lesion may receive the combined and coordinated skills of the medical profession.

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ABSTRACT OF DISCUSSION

DR. GEORGE W. PARSON, Texarkana: Dr. Underwood has presented the essential procedures in the detection of precancerous lesions of the gastrointestinal tract. His paper stresses several important points: (1) the physician should keep his threshold of suspicion of cancer low, (2) every patient whose symptoms suggest a change in function of any part of the gastrointestinal tract should be examined early and completely, (3) investigations should be made repeatedly and without hesitation, and (4) when a lesion is discovered, it should be treated early by the most acceptable methods. Diligent application of these principles certainly will decrease the incidence of nonresectable malignancies of the gastrointestinal tract.

I wish to report the case of a white woman, aged 61, whose symptoms were indicative of colonic dysfunction. Roentgenograms of the barium-filled colon revealed a filling defect, apparently in the lower descending colon at the level of the crest of the left ilium, and multiple diverticula. After the barium had been partly expelled, the roentgenograms showed a circumscribed mass in the pelvis overlying the lower sacral segments. Those made after the insufflation of air showed a circumscribed mass similar in appearance again at the level of the crest of the left ilium. The mass was thought to be a pedunculated polyp but the degree of mobility was unusual in our experience. At operation a benign polyp 2.4 cm. in diameter, which was attached to the posterior wall of the lower part of the descending colon by a pedicle 5 cm. long, was removed.

Fiske Fund Prize Dissertation

"The Present Status of Adrenocortical Hormone Therapy —Its Uses and Limitations" is the subject for the prize dissertation of 1951, trustees of the Caleb Fiske Fund of the Rhode Island Medical Society have announced. A prize of $200 is offered for the best dissertation submitted by December 2. Further information may be obtained from the Rhode Island Medical Society, 106 Francis Street, Providence 3.

Gain in Physician Population

A report of the medical licensure statistics for 1950 published in the May 26 issue of *The Journal of the American Medical Association* reveals that on December 15, 1950, there were 209,040 physicians in continental United States. The report shows 6,002 additions to the medical profession in the United States and its possessions last year and 3,794 deaths, making a net gain of 2,208 in the physician population.

ESOPHAGEAL HIATUS HERNIA IN OLDER PERSONS

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IT now seems well established that esophageal hiatus hernia is not a rare anatomic lesion. We believe that this fact should be more generally realized and that the possibility of esophageal hiatus hernia should be constantly considered as a cause of upper abdominal distress, since it is a lesion for which simple therapeutic measures may afford considerable symptomatic relief.

There are three general types ef esophageal hiatus hernia, which have been fully described by Wangensteen[9] and Akerlund.[1] The first of these is the partially thoracic stomach associated with a short esophagus. This is not a true hernia of the stomach through the hiatus, since the stomach may never have occupied a normal position in the abdomen. Many observers believe that this condition is a congenital anomaly but others suggest that the esophagus is shortened sometime in postnatal life by intrinsic or extrinsic inflammatory disease. Whatever the cause of the defect, its characteristic feature is an esophagus which is so shortened that it cannot under any circumstances reach the diaphragmatic hiatus. It is a relatively rare lesion.

The second type is the para-esophageal hiatus hernia, in which the esophagus is of normal length and enters the stomach in its normal relationship below the diaphragm but in which a portion of the stomach is herniated above the diaphragm alongside the esophagus. This lesion is said by some to be quite common but has not been recognized positively in our series.

The third type is that in which the stomach herniates through the esophageal hiatus, the proximal segment of esophagus being redundant. This is the esophagogastric type of hernia, which is generally accepted as constituting approximately two-thirds of the cases. This sort of hernia has been common in our experience, making up all but a few of the cases in our series. These latter few were thought to be associated with a short esophagus.

It has been our experience that the accurate distinction between the three types of hernia is difficult, even though the roentgen examination be done with great care and films exposed in all projections. Moreover, we believe that positive identification of the exact type of hernia is of much less importance than the careful distinction between hernias which are reducible in the upright position and those which are not. From the clinical standpoint, it appears more difficult to afford symptomatic relief in cases in which the hernia is constantly incarcerated above the diaphragm.

Esophageal hiatus hernia is encountered primarily in middle and later life, although when the hernia is congenital in origin the symptoms may begin in childhood. The uniformity of age undoubtedly is of etiologic importance. Degenerative changes resulting in the loss of elasticity of the hiatal tissues contribute to the formation of the hernia. Abnormal stress, such as would occur in frequent episodes of coughing, retching, or vomiting, could also stretch and possibly tear the tissues of the hiatal opening. Increased intra-abdominal pressure from any cause is also a frequent factor in inducing changes in the esophageal hiatus. Obesity, abdominal tumors, ascites, or pregnancy may be contributing factors in some cases. Rigler[13] observed hiatus hernias in 18 per cent of 160 multiparas and 5 per cent of primiparas. In only 3 of 10 women examined from one to eighteen months postpartum was the hernia again seen.

FREQUENCY

Esophageal hiatus hernia is not a rare defect. In our series of 1,306 patients who have undergone 1,504 roentgen examinations of the upper gastrointestinal tract since 1948, 37 (2.06 per cent) were observed to have an esophageal hiatus hernia. It has been estimated by Rigler[3] that in general medical practice symptoms sufficient to bring the patient to the roentgenologist or physician for gastrointestinal study will result in discovery of an esophageal hiatus hernia in 2 of every 100 patients examined. Brick[3] reported that among 3,448 patients examined in a two year period were noted 308 hernias of the esophageal hiatus, an incidence of 8.93 per cent. This was the second most frequent lesion diagnosed, duodenal ulcer having been found in 20.41 per cent of cases, and esophageal hiatus hernia was more than twice as frequent as gastric ulcer or gastric carcinoma. Harrington,[4] operating on 500 patients for other reasons, observed that in 65 per cent the diaphragmatic relations were normal. In the remaining 35 per cent one or more fingers could be inserted between the esophagus and the diaphragm. This finding was more frequent after the fourth decade and was seen more frequently in women. Ude[15] also noted the increased in-

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cidence in women, who outnumbered men 15 to 4. Of our 37 patients 22 were women and 15 were men. The youngest patient was 38 years of age and the oldest 82 years, and the average age was 62.6 years.

SYMPTOMS AND DIAGNOSIS

In general, the symptomatology depends upon the amount of mechanical interference with the function of the herniated organs or pressure on the organs encroached upon within the thoracic cage. With each inspiration the hernial ring is narrowed as the diaphragm descends. At the same time, the suction on the hernial contents resulting from the pressure differences in the chest and the abdomen is increased. This means that with each inspiration the involved portion of the stomach is drawn further into the chest and simultaneously squeezed. The process is reversed during expiration. This mechanical situation may produce constant distress or very little discomfort. Frequently, there is a symptomatic disturbance only when the stomach is distended with food or gas. Harrington[6] has termed esophageal hiatus hernia "the masquerader of the upper abdomen." Instead of the many symptoms that may be present in these cases, there may be none.

In 6 of our patients, symptoms were mild or absent. In 23 patients the symptoms were moderately severe and in 8 cases symptoms were considered severe. In 31 cases the symptoms had been present longer than a year and in 1 case the symptoms had been present for twenty years. In the majority of our patients the symptoms not only had been present for more than a year, but these patients had been under medical care during this entire period, a correct diagnosis never having been made. Patients in whom the hernias were productive of symptoms usually had several complaints, the most common being dysphagia and pain. This pain varied in extent, character, and location. In some cases it was in the chest, either precordial or radiating upward into the shoulder, through to the back, or downward into the abdomen. In the most characteristic cases the distress was aggravated by or occurred only when lying down. Symptoms were often relieved by assuming the upright position.

In 2 patients in this series the symptoms referable to the hernia were markedly aggravated after cholecystectomy, probably because of the recumbency required during and immediately after operation. One of these patients developed a moderately severe gastric hemorrhage two days postoperatively. In other instances food intake initiated an attack of epigastric pain which came on during or after a heavy meal but was partially relieved by belching, vomiting, or administration of antacids. Bleeding was noted in 5 patients. Ulceration was demonstrable in 4 patients, and in 11 patients a moderate anemia was present.

Esophagoscopy and roentgenography are the two diagnostic methods available for the detection of esophageal hiatus hernia. Roentgen examination is much more common and was used to establish the diagnosis in each of the cases in this series. During roentgenographic examination the esophagus and stomach must be viewed with the patient in various positions, both upright and prone. It is especially helpful to view the area in question with the patient in the Trendelenburg position and rotated up on the left side so that the esophagus and stomach are projected free of the spine. In several instances the hernia was apparent only when the patient was given a swallow or two of barium mixture while in this position.

An effort should always be made to determine whether or not the herniated portion of the stomach returns to its normal position below the diaphragm when the patient assumes the upright posture. In 7 of the 37 patients the hiatus hernia was seen to be fixed, or incarcerated, above the diaphragm and was not reducible in the upright position. None of the patients considered to have achieved an excellent result after interruption of the phrenic nerve had a hernia fixed above the diaphragm. We believe that this observation is of more clinical significance than is the exact classification of the type of esophageal hiatus hernia. In many instances it is impossible to determine correctly the position in which the esophagus enters the stomach, even though films are exposed in various positions and projections. The differentiation between esophageal hiatus hernia and the normal phrenic ampulla at times may be difficult, but the presence or absence of gastric rugae in the pouch will usually make the distinction.

It should be remembered that although a hiatus hernia is demonstrated on roentgen examination, the hernia may not be responsible for the patient's symptoms. Also, we have sometimes observed a small hiatus hernia to be responsible for symptoms previously attributed to some more obvious associated disease in the gastrointestinal tract. In 24 of our 37 patients, 35 associated lesions were noted in the gastrointestinal tract.

Errors in previous diagnosis were common. Thirteen patients, or approximately one-third, of our group had had one or more previous roentgen examinations without recognition of the condition. Many of these patients had more than one clinical diagnosis, and in some cases operations had been performed for other conditions without relief. In one patient 5 associated pathologic lesions were diagnosed. In the study of 404 patients with esophageal hiatus hernia operated upon by Harrington[8] it was observed that an average of three previous erroneous clinical diagnoses

had been made before the correct one was established. It should be emphasized that repeated studies are often necessary to find the hernia, since it may be transitory in nature. Physical examination is of little value in establishing the diagnosis.

Methods of obtaining symptomatic relief are variable and include assumption of the upright position, vomiting, belching, and use of antacids, atropine, and in some cases nitroglycerine. It is apparent that there is no pattern which the symptoms of esophageal hiatal hernia assume. Rather they may simulate esophageal, gastric, duodenal, cholecystic, and coronary artery disease, as well as gastrointestinal bleeding and anemia of undetermined origin.

TREATMENT

Generally speaking, whenever there is a defect or weakened area in any part of the limiting boundaries of the abdominal cavity through which a viscus protrudes, surgical obliteration of the sac and anatomic reconstruction of the abdominal boundary represents the ideal form of treatment. We believe, however, that this rule is not always applicable to hernia through the esophageal hiatus, particularly in the older person. Once the diagnosis of esophageal hiatus hernia has been established and other causes for the patient's symptoms have been excluded, two modes of therapy are available; medical and surgical. Many of these patients can be relieved symptomatically by medical or mechanical treatment, or both. The majority fail to gain complete relief but are sufficiently comfortable to justify continuation of a medical program.

In our series medical and mechanical treatment were recommended in 24 cases. The medical program outlined in most cases consisted of a bland low-residue diet, thorough mastication, elimination of bulky foods, and swallowing of small amounts at a time. In those cases in which dysphagia was particularly prominent the taking of increased amounts of fluid with food to aid its passage through the cardio-esophageal junction seemed to be of help. Postural measures to encourage the passage of foods also were advocated. The patient frequently improved when a semirecumbent position was used for sleeping. Tight bindings about the abdomen tended to increase intra-abdominal pressure and intensify symptoms and for these reasons were avoided. Antispasmodic drugs and alkaline preparations were used to relieve pain by counteracting the associated gastritis and esophagitis. Aluminum hydroxide, phenobarbital, and belladonna, alone or in combination, were frequently used and were most effective when ulceration was present. A regimen similar to that used in the treatment of peptic ulcer was followed in most cases. In addition, reduction of the patient's weight was an extremely important factor.

Twenty-four patients were treated by medical and mechanical measures. Results in 7 patients were considered good. In 8 the results were fair and in 9 results were considered poor in that symptoms were relatively unchanged as compared to the period prior to therapy.

Surgical measures are indicated when medical measures fail to give relief. Our reasons for performing interruption of the phrenic nerve in elderly persons are as follows: Sauerbruch[14] many years ago advocated phrenic nerve interruption in cases of diaphragmatic hernia in infants and in old age for definite evidence of obstruction, incarceration, and strangulation and in cases in which the general condition of the patient precluded a more radical type of operative repair. This operation was regarded, however, as a temporary measure. In addition Harrington[5, 7] used phrenic nerve interruption as a preliminary procedure in 294 cases of a total of 430 and as a therapeutic procedure in 33 of the same series. Overholt[11] had satisfactory results with this procedure in instances in which advanced age precluded a more radical operative procedure. More recently Pickhardt and his associates[12] have recommended this operation as a safe procedure in which satisfactory relief was obtained in elderly patients.

Phrenic nerve interruption was done on 13 of the 37 patients. Seven have obtained excellent results with complete or nearly complete relief and 5 have obtained good results with only minor symptoms persisting which were controlled by a medical program. As determined by a recent follow-up on all patients, one poor result was obtained. This patient had a long-standing history of multiple gastrointestinal complaints with a psychoneurotic personality and had failed to respond to intensive medical therapy. Phrenic nerve interruption was therefore done and results were completely unsatisfactory. In retrospect, we believe that the bizarre character of his complaints should have caused us to recognize their origin and to anticipate an unsatisfactory response.

A second patient who had obtained complete relief of symptoms after phrenic nerve crush experienced a recurrence of original symptoms after an interval of six months. Fluoroscopic examination revealed return of function of the left part of the diaphragm. Phrenicoexeresis was done. The patient again obtained complete relief and has remained asymptomatic.

In one case surgery was believed to be contraindicated because of extensive pulmonary fibrosis and asthma.

As previously mentioned, the chief factor behind the symptomatology in these patients is the constricting effect of the edges of the diaphragmatic hiatus.

This effect may be direct when an ulcer or gastritis develops in the stomach at the site of constriction or it may be reflex when cardiac arrhythmias appear secondarily. As pointed out by Maier,[8] the results of diaphragmatic paralysis in the treatment of hiatus hernia are not to be judged entirely by the postoperative roentgen observations but by the effect of operation on symptoms. A good clinical result may be obtained without significant change in the degree of herniation present.

Maier[8] believed that the chief indications for diaphragmatic paralysis in preference to more formal repair of the hernia are (1) advanced age of the patient, (2) poor general condition, (3) severe cardiac or respiratory disease, (4) symptoms so slight that a major surgical operation does not seem indicated, (5) symptoms which are not definitely known to be caused by hiatus hernia, (6) possible control of hemorrhage due to secondary ulceration of the stomach or esophagus, and (7) relief of acute obstruction without strangulation. It is our belief that the medical and surgical treatment of hiatus hernia must be individualized for best results.

The operative procedure which was followed was that described by Alexander.[2] It is important, of course, to search for and crush or divide when found, any accessory phrenic nerves. At the completion of the operation the patient is taken to the fluoroscopic room where tests are made to determine the completeness of paralysis of the hemidiaphragm. Two tests are used in determining this paralysis. The first is the so-called "sniff test" in which paradoxical motion of the paralyzed diaphragm on sniffing is noted; the second test is one in which the patient is asked to inhale deeply while the observer presses his two hands against the lower lateral portion of the ribs and watches the diaphragm fluoroscopically. The paralyzed hemidiaphragm will not move downward during this maneuver. If pressure is not exerted against the ribs, costal respiration may cause the ribs to flare sufficiently to produce slight downward motion of the paralyzed diaphragm. Any downward motion of the diaphragm during this test strongly suggests the presence of a functioning accessory phrenic nerve; for that reason it has become our custom to use not only the "sniff test" but the "deep breathing—rib holding test" as well.

From our experience with 13 patients, as well as the reports in the literature, we recommend interruption of the left phrenic nerve in the treatment of hiatus hernia in older persons, with or without incarceration or obstruction, in whom symptoms are such that some form of surgical treatment is required. In our experience, the operation was safe and gave satisfactory relief in elderly patients.

SUMMARY

Reported herewith is a series of 37 patients ranging in age from 38 to 82 years (average 62.2 years) with esophageal hiatus hernia who have been observed during the past three year period. The clinical manifestations resulting from associated disease with hiatus hernia which were encountered are described. It has been stressed that even in the presence of a demonstrable esophageal hiatus hernia other disease must be searched for because of the frequent occurrence of associated lesions. When the symptoms are due to esophageal hiatus hernia, the favorable response of many patients to phrenic nerve interruption has been gratifying.

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ABSTRACT OF DISCUSSION

DR. ROBERT SHAW, Dallas: Drs. Madding and Spencer have stressed the frequency with which the mechanical fault of esophageal hiatus hernia occurs. As they pointed out, it may be present at birth but usually is seen in people past the age of 50 years. That means that the major problem occurs in the group that they have designated as older persons.

The authors have adequately covered the symptomatology and differential points in the diagnosis of esophageal hiatus hernia. I would like to stress, however, that although this condition may be frequently observed in patients who have no abdominal complaints, in many others it is not a benign symptomless lesion. Many patients who have been examined have been treated for a variety of diagnoses, such as, heart disease and peptic ulcer, when in reality their symptoms were caused by a diaphragmatic hernia. Furthermore, the complications of this condition may be severe.

The most frequent complications which may make surgical treatment mandatory are (1) excessive bleeding from

the ulcerated incarcerated stomach; (2) incarceration of the other viscera, such as the transverse colon within the hernial sac causing intestinal obstruction; and (3) peptic esophagitis with scarring of the lower esophagus leading to severe stenosis. Sweet believes that the peptic esophagitis due to the regurgitation of gastric contents into the lower esophagus is a precancerous lesion since he has seen a hiatus hernia in 20 per cent of the patients having carcinoma in the lower third of the esophagus.

Because of these complications, which may occur in addition to the unpleasant symptoms caused by the condition, Dr. Paulson and I have favored repair of the hernia over a palliative procedure such as a temporary crush of the phrenic nerve. As has been pointed out by Drs. Madding and Spencer, diaphragmatic paralysis on the left will relieve, partially, the distressing symptoms of this condition. However, the relief can only be temporary and we do not believe this therapy will prevent complications. We have done temporary phrenic nerve crushes on 4 patients with esophageal hiatus hernia. In 2 patients, temporary relief was obtained for approximately six months and in the other 2 patients the relief was not striking.

During the past five years, Dr. Paulson and I have seen 54 patients with esophagogastric diaphragmatic hernias. In 34 of these patients the hernia was repaired. There was no mortality in this group; however, the hernia recurred in 6 patients. Four of these patients subsequently have had successful repairs. Two of the patients in this group had had one or more repairs in other clinics before they came to us for surgical treatment. Twenty patients were seen but not operated upon. In 12 of this group surgery was advised, but this advice was not accepted by the patients. In 7, surgery was not advised either because of the lack of severity of symptoms or because of other compelling reasons concerning the patient's general health. In only 1 case was surgery not advised because of age and that was in a woman of 85. In 1 patient who had suffered with this condition for more than twenty years the general condition of the patient at the time surgical consultation was sought was so desperate that surgery would have been impossible. Twenty-two of the patients having surgical repair of the hernia were older than 50, 10 of them being 60 or more. The oldest patients having repairs were 75 and 78. In the case of the patient who was 78, surgery was indicated because of incarceration of the transverse colon in the hernial sac.

Four of the recurrences were in the first 8 patients operated upon by me, at which time I was using a transthoracic supradiaphragmatic type of repair. Since using a transthoracic-transdiaphragmatic repair, in which advantage can be taken of the better repair that can be accomplished on the under surface of the diaphragm, we have had only 2 recurrences in 26 patients. I believe that as our technique improves the percentage of recurrences will decrease.

The only complication occurring in our group of patients was empyema in 1 patient, which cleared with rib resection drainage. The morbidity in general is not high. On the average, patients leave the hospital on the fifth or sixth postoperative day. When a successful repair of the hernia is obtained, the relief from symptoms is complete. It has been our experience that severe esophagitis gradually heals with improvement in the ability of the patients to swallow. Because of our experience in the surgical repair of esophageal hiatus hernia, we are of the opinion that repair of the hernia should be done except in the case of extreme age or in the presence of some other lesion carrying a poor prognosis.

DR. MADDING, closing: The problem of esophageal hiatus hernia is one which most frequently affects patients in the older age group, a group in whom obesity and cardiovascular renal disease are commonly seen. Such complicating conditions make these patients poorer candidates for major surgical procedures. Seventy-six per cent of hiatus hernias occur in patients older than 50 years of age and more than 50 per cent of this group are older than 60 years of age. It should be remembered that the rate of recurrence after formal repair of esophageal hiatal hernia varies from 5 to 10 per cent, which means that patients in this group will require a second major operation.

Although serious complications rarely occur from esophageal hiatus hernia, it is known that some of these patients will develop an esophagitis which occasionally will progress to ulceration, submucous fibrosis, and stricture formation. If phrenic nerve interruption is done early, the reflux of gastric contents into the lower esophageal segment will be stopped and an esophagitis prevented.

I would like to stress that in selecting any form of surgical treatment for benign lesions, such as an esophageal hiatus hernia, one should be chosen which will relieve the symptoms, carry the lowest mortality and morbidity rates, and impose the least economic sacrifice on the patient. If phrenic nerve interruption does not afford sufficient relief of symptoms, a formal repair may be performed.

Medical Costs Rise Slower Than Other Items

Medical care and drug costs in June were 54.7 per cent above the average for the 1935-1939 base period, while clothing costs were up 104 per cent, house furnishings 112.5 per cent, recreation 68.3 per cent, personal care (hair cuts, toilet goods, and so forth) 93.69 per cent, transportation 71.6 per cent, and food 126.8 per cent. These figures were released by the United States Bureau of Labor Statistics after its mid-1951 survey of living costs. The same trend was evident during 1950.

Grant Aids Heart Research

A grant-in-aid of $7,500 from the Texas Heart Association will establish a heart disease research program at the Foundation of Applied Research on Essar Ranch near San Antonio. The first investigation under the program will be a study of cholesterol metabolism as related to heart disease and will be directed by Dr. N. T. Werthessen, physiology research specialist.

American College of Chest Physicians Essay Award

A prize of $250 is offered by the American College of Chest Physicians for the best original contribution, preferably by a young investigator, on any phase of chest disease. Deadline for submitting manuscripts is April 1, 1952. Further information may be obtained from the Committee on College Essay of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10.

In 1948, Purdue University polled 10,000 high school students and one of the questions asked was: "Should or should not our government establish a permanent system of providing medical services for all?" Amazingly, 80% of the high school students answered in the affirmative.—AAPS *News Letter*, May, 1951.

The corollary of mass chest survey is subsequent careful, individualized, continued investigation either by, or through referral by, the family doctor.—Ben R. Van Zwalenburg, M. D., J. Michigan State M. Society, November, 1949.

ROENTGENOLOGIC EXAMINATION OF THE SMALL INTESTINE

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ORGANIC disease of the small intestine, exclusive of the first portion of the duodenum, is rare, compared with other portions of the gastrointestinal tract. A satisfactory roentgenologic examination requires time and patience and exposes the examiner, as well as the patient, to a relatively large amount of radiation. In addition, the accuracy of the examination of the small intestine is less than that of other portions of the gastrointestinal tract. For these reasons the examination should be reserved for those cases in which there are definite indications for it.

METHOD

Several methods of examination have been described, but all of those which are considered to be adequate depend upon roentgenoscopic visualization of all segments between the first portion of the duodenum and the ileocecal valve. The distal segments of the ileum can be examined satisfactorily on some occasions by retrograde filling through the ileocecal valve at the time of the barium enema. This type of examination is seldom adequate for a distance of more than 2 or 3 feet (60 to 90 cm.) and may be impossible if the ileocecal valve is competent. In the methods usually employed, the patient either drinks a suspension of barium in water or the substance is introduced into the duodenum by means of a tube. This latter type of examination often is called the "small intestinal enema." Regardless of the manner of introduction, each segment of the duodenum, jejunum, and ileum must be observed roentgenoscopically as the opaque material fills the lumen and travels toward the ileocecal valve.

At the Mayo Clinic we employ a suspension of barium sulfate in water mixed in the proportions of 12 pounds (5.4 Kg.) of barium (dry weight) to 20 pints (about 9.5 liters) of tap water. After fasting overnight the patient is given 250 cc. of this mixture to drink while standing at the vertical fluoroscope. The esophagus, stomach, and entire duodenum are observed at this time, in addition to as many coils of the upper part of the jejunum as will fill in the first few minutes. To speed the examination the patient then is instructed to lie on his right side, for in this position the stomach empties most readily. Subsequent roentgenoscopic examinations are made at intervals. The interval usually chosen is thirty minutes, but it may be shortened or prolonged, depending upon the rapidity with which the head of the opaque column travels. These interval observations are continued until all segments of the small intestine have been seen and some of the opaque material has entered the cecum. When the stomach has emptied from one-half to two-thirds of the original volume of solution, the patient is given another 250 cc. of the mixture to drink. This ensures a column of adequate length to examine at each observation. In cases in which the transit time is slow, we have found it advantageous to allow the patient to drink cold water or eat a light meal. The patient is instructed to spend the time between fluoroscopic examinations lying on a couch on his right side.

The transit time between the duodenum and ileocecal valve varies considerably. In some instances the head of the column may reach the cecum within forty-five minutes, while in others it may take as long as four to six hours. This wide variation of transit time has no significance unless accompanied by other signs of organic disease.

Roentgenograms are made at intervals for the record. If a lesion is found, an attempt is made to demonstrate it roentgenographically, sometimes using "spot technique." Manipulation of the intestinal coils by palpation at the time of roentgenoscopy is employed to uncover each segment as it becomes distended with the barium mixture.

INDICATIONS FOR EXAMINATION

Because it is obvious that this examination is too time consuming to be used as a routine, only those patients are selected for examination who give definite evidence of gastrointestinal disease and in whom disease of the esophagus, stomach, and colon have been excluded by prior satisfactory roentgenologic examinations of those organs.

In my experience the most important indication for a roentgenologic examination of the small intestine is gastrointestinal bleeding for which a cause has not been found in the esophagus, stomach, first portion of the duodenum, and colon. In most instances this bleeding is manifested by the appearance of tarry stools. On some occasions, however, the stools may contain red or plum-colored blood. Blood may be vomited or there may be chemical evidence of occult blood in the stools. Some form of bleeding occurs in about one-half of all cases of primary tumor

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of the small intestine, in more than one-half of the cases of Meckel's diverticulum which is producing symptoms, and occasionally in cases of regional enteritis or solitary ulcer.

Another indication is the existence of a palpable mass in the abdomen which has not been explained by other methods of examination. In cases treated at the Mayo Clinic a palpable mass has been present in more than one-fourth of the cases of primary tumor and in a few cases of regional enteritis and Meckel's diverticulum.

The existence of intestinal obstruction is often an indication for the roentgenologic examination of the small intestine. If the obstruction is complete or if its presence can be demonstrated by the appearance of dilated gas-filled loops of bowel on the ordinary roentgenogram of the abdomen, administration of opaque material is contraindicated. In cases in which the obstruction is incomplete, and particularly in those cases in which it is intermittent in nature, much information can be gained from the roentgenologic examination. The clinical signs of obstruction are pain associated with nausea and vomiting, abdominal distention, borborygmus, or visible peristalsis. Pain, even of a cramping nature, when not accompanied by some of the other signs of obstruction, seldom is explained by the roentgenologic examination. Clinical evidence of obstruction has been present in about one-fourth of the cases of primary tumor of the small intestine which we have encountered, in those few cases of Meckel's diverticulum complicated by intussusception, and in some of the cases of regional enteritis.

The clinical syndrome of diarrhea, fever, loss of weight, and cramping abdominal pain is often associated with regional enteritis. The presence of this syndrome constitutes an indication for roentgenologic examination of the small intestine.

Less common indications for the examination are found in the presence of an abdominal fistula or in those cases in which it is necessary to exclude an organic disease of the small intestine before undertaking treatment for a known lesion elsewhere. The examination may be employed in cases of steatorrhea.

DIAGNOSIS

In the normal small intestine the barium column is continuous and not broken up into widely separated boluses. The caliber of the lumen decreases as the ileocecal valve is approached. In the jejunum the lumen is from 2 to 3 cm. wide, while in the ileum it is somewhat narrower. The mucosal folds in the duodenum and upper portion of jejunum are high, lie close together, and run transversely. As the ileocecal valve is approached, these folds gradually become lower and lie farther apart. Two types of intestinal movement usually can be demonstrated. One is the peristaltic rush which propels the column of barium forward. The other is the segmental motion which causes no visible propulsion but in which various segments of the bowel contract rhythmically and produce a churning of the contents.

The most adequate examination of any segment of the small intestine is obtained by watching a peristaltic rush. The lumen in advance of the wave is distended and filled with the mixture. Any constriction, indentation, or intraluminal inclusion is best demonstrated at this time. When peristaltic activity is low, the examiner must be content with observation of each individual loop as it is manipulated by palpation. Evidence of disease is manifested by additions to or subtractions from the normal contours and by changes in the mucosal relief pattern.

The most profound and general change in the appearance of the small intestine is produced by a variety of disease processes which affect both the motility and the relief pattern in a general manner. The picture produced is one of segmentation of the column, increase or decrease in the mucosal relief, loss of normal tone, and either increase or decrease in the transit time. Known as "deficiency pattern," this combination of features was first described as a manifestation of sprue, but subsequently has been shown to exist in most cases of steatorrhea, regardless of cause, in cases of ascites, peritoneal carcinomatosis, and even in certain instances of emotional disturbance. The appearance of this "deficiency pattern," therefore, is not necessarily indicative of organic disease. Rather it should be regarded as a syndrome which is produced by many different conditions.

Regional enteritis is the most common inflammatory process to involve the small intestine. This produces a more or less pronounced constriction of long segments of the bowel, together with changes in the mucosal pattern. These latter changes depend upon ulceration, whereas the constriction is due to thickening of the bowel wall. Regional enteritis may be found in any segment of the small intestine but most commonly attacks the terminal portions of the ileum. In appearance it is similar to ulcerative colitis. The areas of involvement may be broken up by patches of normal intestine called "skip areas."

Tuberculous enteritis produces an appearance similar to regional enteritis. The roentgenologist often cannot distinguish between the two diseases. If an extra-alimentary focus of tuberculosis can be demonstrated, as in the lung, kidney, or bone, a provisional diagnosis of tuberculous enteritis may be made. A definitive diagnosis depends upon histopathologic and bacteriologic proof.

Solitary ulcer of the small intestine is uncommon.

Peptic ulcers may be found in the second portion of the duodenum or in conjunction with Meckel's diverticulum and are accompanied usually by some constriction of the bowel at the point of the ulcer and by an ulcer crater. Solitary ulcers elsewhere in the small intestine have been described but are encountered rarely.

Diverticula are found frequently in the second and third portions of the duodenum. In this location they do not often cause clinical symptoms. Multiple diverticula, found sometimes in the upper portion of the jejunum, may cause clinical symptoms when they are large and empty slowly. Inflammatory changes of these diverticula are not common. Obstruction may occur when a large diverticulum is located in the mesenteric border of the jejunum and if, when filled, it compresses the lumen of the bowel.

Meckel's diverticulum is a congenital outpouching of the ileum found in about 2 per cent of all persons. The lesion is frequently the site of heterotopic tissue. This tissue may be gastric mucosa which produces hydrochloric acid. This acid in turn may cause peptic ulceration, either of the diverticulum or of the ileum at the mouth of the diverticulum. Such ulcers may bleed, cause periodic pain, or produce obstruction by the formation of scar tissue and contraction of the lumen. Meckel's diverticulum also may produce symptoms by invagination into the lumen of the ileum with the formation of intussusception. The diagnosis is made by demonstrating a diverticulum of the ileum.

Intussusception can be recognized by the narrowing of the lumen of the intussusceptum and by the double contour and concentric ring appearance of the intussuscipiens. Most cases of intussusception in the small intestine are secondary to a tumor or to invaginated Meckel's diverticulum. The underlying lesion cannot be demonstrated unless the intussusception can be reduced at the time of roentgenoscopy.

Foreign bodies in the small intestine may be recognized if they are opaque. Nonopaque foreign bodies cause a filling defect in the lumen of the intestine and must be distinguished from intraluminal tumors. If the foreign body is large, it may produce obstruction. In cases of exogenous foreign bodies, a history of ingestion usually can be obtained. Endogenous foreign bodies, such as enteroliths or gallstones, must be distinguished by their roentgenologic manifestations.

Herniation of the small intestine into the thorax or into the inguinal canal and scrotum can be recognized by the position of the loops of barium-filled bowel. Intra-abdominal hernia must be considered in any case in which the loops of the intestine seem to be situated and contained within a small portion of the abdomen.

Primary tumors of the small intestine may be benign or malignant. The most common tumor, adenocarcinoma, produces a short, sharply demarcated filling defect in the column of barium, together with obliteration of the normal relief pattern. The appearance of a carcinoma of the small intestine is similar to that of carcinoma of the colon. Complete or partial obstruction may be present and will cause dilatation of the lumen proximal to the lesion. Lymphoblastoma of the small intestine produces an appearance similar to that of carcinoma. In some instances the tumor involves a longer segment of bowel than carcinoma and may involve multiple segments. Lymphoblastoma seldom can be distinguished from carcinoma by its local roentgenologic manifestations. Leiomyosarcoma, although malignant in nature, most frequently produces an appearance similar to that of its benign counterpart. Carcinoid tumor, which must be considered to be malignant because it produces distant metastasis, seldom can be diagnosed as such. Usually this lesion attacks the wall of the bowel without causing ulceration of the mucous membrane. Most frequently its roentgenologic manifestations are those of obstruction or intramural mass with distortion but without obliteration of the relief pattern.

Benign tumors, of which leiomyoma is the most common in my experience, can be divided into two groups: those which grow in the wall of the bowel beneath the mucous membrane and those which grow into the lumen of the bowel. Most leiomyomas and lipomas develop in the intramural submucosal position. They may indent the margins of the barium column, flattening the mucous membrane without producing evidence of mucosal ulceration. By these characteristics they can be distinguished from carcinoma. Adenomas, on the other hand, are usually intraluminal and pedunculated. Certain of the leiomyomas and lipomas also may be pedunculated and lie within the lumen. These tumors produce intraluminal filling defects which are indistinguishable one from another and which have the same roentgenologic characteristics as adenomas in the colon.

Bands and adhesions may produce partial or complete obstruction. Roentgenologically there is dilatation of the intestine proximal to the lesion and the constricted segment is short, sharply demarcated, and without change in the mucosal relief pattern. In many of these cases the roentgenologist is unable to make a diagnosis other than that of obstruction.

DIAGNOSTIC ACCURACY

Because it is sometimes impossible to obtain satisfactory visualization of every segment of the small intestine during the course of the roentgenologic examination, the accuracy of this method does not compare favorably with the accuracy of the roentgenologic examination of the stomach or colon. Particularly in

thin patients is it difficult to separate the loops of ileum which are situated below the pelvic brim. Lesions in this position may be obscured by overlying segments of bowel. It is also difficult and sometimes impossible to demonstrate those benign tumors which originated in the wall of the bowel just beneath the serosa and extend outward into the peritoneal cavity. Many carcinoid tumors and some leiomyomas develop in this particular location. Tiny lesions, such as minute hemangiomas, invariably will be overlooked in spite of their ability to cause severe gastrointestinal hemorrhage. Nevertheless, it has been our experience at the Mayo Clinic that the examination is well worth performing in those cases in which there are definite indications of gastrointestinal disease.

I believe that almost all the cases of regional enteritis, of carcinoma, and of lymphoblastoma should be recognized. In some instances the roentgenologist may be unable to make a more specific diagnosis than that of obstruction, but he will be able at least to recognize that a lesion is present and to determine its location. It is probable that some of the benign tumors will be overlooked, particularly subserosal lesions. In the majority of instances, Meckel's diverticulum will elude discovery, especially if the diverticulum is not producing symptoms. Solitary ulcers, adhesive bands, and foreign bodies usually will be missed unless they produce some degree of obstruction. In general, the roentgenologist should be able to recognize the existence of an organic lesion and determine its location in about 85 per cent of cases.

SUMMARY

The organic lesions of the small intestine most commonly encountered by the roentgenologist are regional enteritis, benign and malignant tumors, and Meckel's diverticulum. Accuracy of diagnosis depends upon a technique of roentgenologic examination which combines careful fluoroscopic observation with roentgenography. Approximately 85 per cent of these organic lesions can be diagnosed by this method.

DUODENAL ULCERS

Place of Surgical Treatment

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THE principal cause for any type of surgical intervention in the treatment of duodenal ulcer is that for one reason or another medical management has proved inadequate. This statement is not an indictment of the internist; rather it is the admission by all who have interested themselves in these troublesome and often trying cases that a proper medical regimen will give satisfactory results in approximately 80 per cent of these patients. It must also be admitted that whereas surgical treatment will prove successful in the vast majority of the remaining 20 per cent, there still will be those patients whose lesions defy the best efforts of both the physician and surgeon.

The aims of ulcer therapy are (1) to control symptoms, (2) to eliminate the ulcer by getting it to heal, and (3) to prevent recurrence. For these reasons the careful individualization of each patient is essential as well as the close coordination of patient, physician, and surgeon. Therefore, patients with recognized duodenal ulcers should be given the benefit of a carefully controlled course of medical management that not only stresses diet and drugs but considers the make-up of the patient and attempts to straighten out his way of life as well. As general practitioners know so well, in these days of great pressure and stress, the personal equation cannot be overlooked if good results are to be expected; this is particularly true of patients with ulcers.

Although much thought and work is continually centered on the cause of ulcer formation by some of the ablest investigators, there is much yet to be learned about this problem. It is known that enzyme imbalance and hydrochloric acid play major roles, also that hypermotility plays a part, if not as an etiologic factor, certainly as an aggravating force. The psychic element has been firmly established and its importance cannot be stressed too strongly. Undoubtedly certain persons are more prone to develop ulcer than others, and a combination of the factors mentioned in this paragraph forms the basis for the vast majority of duodenal ulcers in man.

CANDIDATES FOR SURGERY

As was stated previously, surgical management is needed in those patients who have not responded to medical therapy. For the most part these patients fall into rather definite categories:

1. Those who cannot be relieved of pain, commonly designated as having "intractable ulcers."

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2. Those whose main symptom is pyloric obstruction. Unfortunately, in many of these patients medical management heals the ulcer but in so doing lays down so much scar tissue that obstruction of the pylorus results.

3. Those whose disease has as its most important manifestation hemorrhage, either periodic exsanguinating bouts or the loss of small quantities of blood during a number of weeks.

4. Those with the surgical emergency of perforation. They may or may not have known of the presence of an ulcer and often will be among the younger age group.

5. Those who either are not willing or able to follow their prescribed treatment, become impatient, and demand that something be done. It is among these patients that often are found some of the most difficult problems. These persons will try the mettle of any physician, and the wise surgeon will not resort to surgery until he has reviewed the whole problem with the patient and his internist. Since none of the changes brought about by the surgeon are truly physiologic, it should be determined that further conservative treatment will be of no avail. The resort to operation and the postoperative results in such instances, good or bad, should be placed where they belong—in the lap of the patient and not the doctor.

It is recognized of course that many patients will not fit exactly into any one of the five classifications and may have characteristics of more than one. However, it is interesting to note that using the criteria of the first four groups, as a rule the more positive a candidate for surgery, the more likely that complete relief will result postoperatively.

To consider a little more fully the types of patients in the groups just mentioned, pain is perhaps one of the commonest symptoms of ulcer and is directly due to the action of hydrochloric acid on the ulcer. This action in turn increases the motility of the stomach and therefore causes increased gastric secretion. The vicious circle continues unless alkalies, antispasmodics, and diet break it and bring about conditions favorable to healing. In a percentage of patients pain, particularly aggravating at night, will persist in spite of all therapy. Under these circumstances frequently there is an ulcer located on the posterior wall of the duodenum, either adherent to or burrowing into the pancreas and often associated with some degree of chronic or even subacute pancreatitis. There may be radiation of the pain into the back, extending at times to the left side. When such an ulcer is present, it is fair to say that nothing short of surgical intervention will give lasting relief.

When the main symptom of a patient with duodenal ulcer is evidence of gastric retention, it is necessary that true organic pyloric obstruction be demonstrated before the patient is considered a candidate for surgery. Many patients who at first have marked gastric retention with or without the demonstration of an ulcer crater will respond well to conservative therapy. Edema plays a major role in such a block, and when the patient is put at bed rest and the stomach is kept relatively empty, a large number of these patients will do well without operation. If, however, in spite of decompression of the stomach, antacids, and antispasmodics the obstruction persists, surgical help must be sought.

There is still much honest difference of opinion among both gastro-enterologists and surgeons as to the role of surgery in the treatment of bleeding duodenal ulcer. Some have arbitrarily classed patients older than 45 years of age with a demonstrated duodenal ulcer and evidence of even mild bleeding as candidates for surgery; with a similar group younger than 45 the inclination has been to continue conservative treatment. I do not believe the problem is quite that easily solved. For instance, there are those patients with sudden exsanguinating hemorrhage. It is of the utmost importance that these patients be hospitalized whenever possible so that an adequate supply of whole blood is available and the clinical course can be followed closely.

No rule of thumb will indicate early which patient will need surgical intervention or the optimum time for surgery. However, I would like to stress the importance of early consultation of both the internist and the surgeon with the patient. Through early consultation a proper evaluation can be made and the course of events observed closely. There is no doubt that under these circumstances the patient will benefit. In general, I believe that any patient who has shown signs of even small amounts of bleeding over a long period presents a potential surgical problem. It is also my opinion that any patient with a demonstrable ulcer who has more than one severe hemorrhage should be operated upon at the optimum time. That time may be reached within twelve hours after the onset, or it may be after some days or weeks.

Until relatively recently it was agreed by nearly all surgeons that when a duodenal ulcer perforated, immediate operation for its closure was indicated. On the whole, the results with this type of treatment have proved satisfactory. However, a number of competent surgeons have advocated suction drainage of the stomach with the Levin tube without surgical intervention; some reports of favorable results after this procedure have been published. My opinion is that if the patient is close enough to a hospital, the best results will obtain when the perforation is closed as quickly as possible. If, however, there will be delay in reaching hospital facilities, the introduction of suction through a tube in the stomach, together with

adequate supportive therapy, may prove life saving.

The fifth group of patients referred to previously as possible candidates for surgery requires the best judgment on the part of both physician and surgeon. As one able gastro-enterologist said, it is usually a great deal more difficult to deal with the intractable patient than with the intractable ulcer. However, it must always be realized that recurrent, severe ulcer pain is capable of making the most stable person somewhat intractable at times. Therefore, we as physicians and surgeons must be careful not to be too quick to label anyone uncooperative or neurotic.

OPERATIVE PROCEDURES

Although the criteria for surgical intervention in the treatment of duodenal ulcer have become pretty well standardized, there is still a wide difference of opinion among surgeons as to the value of specific operative procedures. In general three main types of surgical approach are used:

1. The more conservative procedures such as gastroenterostomy and pyloroplasty. Although neither of these operations is widely used alone as a definitive procedure today, there is still a place for each. In older patients with simple pyloric stenosis from the scar of an old, burned-out ulcer, either of these procedures is satisfactory. This type of patient is often in rather poor general condition, with a relatively low gastric acidity. The operation can be done easily and will carry a low mortality rate in comparison with a more formidable one. Under these conditions good results can be expected.

2. Gastric resection with some form of gastrojejunostomy, perhaps the most widely used operation at present for radical cure of duodenal ulcer. There is no question that this procedure when carried out in competent hands, with the resection of approximately two-thirds of the stomach and that portion of the duodenum containing the ulcer when possible, will accomplish a high percentage of cures. It will be noted that I use the term "when possible." Some surgeons believe that they can resect every stomach, no matter where the ulcer may be located or how much induration and inflammatory reaction may be present. The vast majority realize, however, that in the case of a penetrating ulcer on the posterior wall, perhaps near the ampulla of Vater and extending into the pancreas, either the ulcer must be left behind or some other type of operation must be performed.

3. Resection of the vagus nerves for treatment of peptic ulcer. When Dragstedt in 1943 reintroduced and popularized this operative procedure, he immediately started a controversy. The debate among surgeons as to the efficacy of this procedure still waxes hot, but enough time has elapsed so that a proper perspective has begun to evolve.

After the vagi have been severed at the level of the lower end of the esophagus in nearly every case a change in the gastric physiology occurs; there is a drop in the hydrochloric acid content of the gastric juice, as well as a diminution in the total quantity secreted in a twenty-four hour period. Also as a rule, with marked atony of the musculature of the stomach a lessening of the peristaltic activity is noted. Because of the sequellae just mentioned, the emptying time of the stomach is lengthened materially. Realizing this latter fact, Dragstedt and other surgeons have combined vagotomy with some type of drainage of the stomach in the treatment of duodenal ulcer. A posterior gastroenterostomy at the most dependent portion of the greater curvature serves well. A pyloroplasty also will give adequate drainage and is preferred by some surgeons.

The two main criticisms leveled against vagotomy by its opponents are that the good effects may not be permanent and that there are enough disagreeable side effects in an appreciable number of cases to outweigh the benefits. It is admitted by almost every surgeon that the operative mortality rate is minimal.

PERSONAL SERIES

I am now reviewing the cases of duodenal ulcer in which my brother, John M. T. Finney, Jr., and I have operated. The follow-up is not as yet complete enough to be statistically accurate, but certain interesting facts have come to light. During the ten year period 1941-1950, 99 patients required some form of surgical intervention. It is interesting to note that the following different procedures were carried out by us: (1) posterior gastroenterostomy, alone or with vagotomy; (2) pyloroplasty, alone or with vagotomy; (3) subtotal gastrectomy, alone or with vagotomy; (4) vagotomy alone by the transthoracic or abdominal approach; and (5) simple closure of the perforated ulcer.

In this series of 99 patients there were 3 hospital deaths, an operative mortality of a fraction more than 3 per cent.

One obese patient who had a resection for an ulcer on the posterior wall of the duodenum that was penetrating into the pancreas developed evidence of infection and died on the ninth postoperative day. Autopsy showed that he had a severe acute pancreatitis and infection about the anastamosis. This patient was operated upon early in 1943, and in the light of our experience since, we would not now attempt a resection but would do a posterior gastroenterostomy with subdiaphragmatic vagotomy.

The second death was of a patient who had also had a resection. The postoperative course was apparently progressing satisfactorily when the patient died suddenly, and autopsy showed that he had a large coronary occlusion. The peritoneal cavity was clean.

The third patient was a 65 year old farmer who had suffered with abdominal distress for many years but who had received no medical therapy other than the ingestion of large quantities of bicarbonate of soda on his own initiative.

Late one night he apparently had a severe sudden abdominal pain but refused to be taken to the hospital until about twelve hours later. Upon admission he had classic evidence of a perforated ulcer.

Supportive treatment was instituted immediately and a Levin tube was passed into his stomach and the contents emptied. During an exploratory operation a large, indurated area just below the pylorus, with a perforation almost large enough to admit the tip of the little finger, was observed. There was gross soiling of the entire peritoneal cavity. The opening was quickly plugged by suturing a wad of omentum in and over the hole, since it was impossible to close the hole with a pure-string or mattress suture.

Postoperatively, suction was continued on the Levin tube, and great care was taken to maintain the fluid and electrolyte balance. The patient also received massive doses of penicillin and streptomycin. However, he died on the ninth postoperative day.

Autopsy revealed that instead of the perforation having been sealed off, it had nearly doubled in size; in spite of both the attempt to close the perforation and the use of continuous suction, the leak had progressed. The postmortem examination disclosed that the patient had died of peritonitis and secondary pulmonary complications. This case has increased my skepticism regarding the value of gastric suction in the definitive treatment of perforated ulcer.

As stated previously, because complete knowledge of the present status of every patient in our series is not yet in hand and because the number of patients in each of the five groups of operations performed is not large enough to be statistically sound, the results have not been tabulated. However, in addition to the 3 operative deaths described, 9 patients either still have definite gastric symptoms requiring strict medical management or have needed further surgery. In this group were 3 patients upon whom transthoracic vagotomy as a definitive procedure was done. We are no longer using this operation in the primary surgical treatment of duodenal ulcer. One 65 year old man who had had resection of two-thirds of his stomach developed a marginal ulcer two years later. Since this lesion did not respond to conservative measures, the vagus nerves were cut above the diaphragm and the patient obtained prompt relief of his symptoms. One other patient who had a resection with a posterior Polya type of anastamosis has since periodically shown signs and symptoms of the dumping syndrome. This syndrome is usually characterized by the rather sudden onset of epigastric distress soon after eating, with a full and at times nauseated feeling. The patient will then feel weak and often will break out in a cold sweat.

In general, 87 of the patients either have been completely relieved of their symptoms or have only occasional minor complaints referable to the gastrointestinal tract. The progress of the patients in this series has been followed a minimum of one year and of those who had resection of the vagus nerves, either with or without other procedures, from one to four years.

CONCLUSIONS

The following conclusions seem justified from a study of the cases of duodenal ulcer operated upon by John M. T. Finney, Jr., and me.

1. No one operation is suited to every patient suffering from duodenal ulcer who has shown that he needs surgical help.

2. It is important to individualize each patient and do the type of operation which will afford the best chance of complete relief of symptoms, at the same time carrying the lowest mortality rate and morbidity.

3. When it can be accomplished without too much technical difficulty, subtotal gastrectomy is probably the operation of choice. However, resection of the vagus nerves together with a properly placed posterior gastroenterostomy or adequate pyloroplasty has proved satisfactory.

4. In those patients who have had vagotomy, there have been no disagreeable side effects except for a few cases of transient diarrhea.

5. The complete cooperation of physician, surgeon, and patient is essential to good management of duodenal ulcer.

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BLOOD COUNT METHOD DEVELOPED

A new red blood cell counter allowing increased speed of mass blood counts has been developed by Cornell University under an Office of Naval Research contract.

Using the new instrument, which relates the red cell count to the electrical conductivity of whole blood, three technicians can perform 40 to 60 blood counts an hour by production as compared to the usual rate of about 12 to 18 an hour.

Mass blood counts are necessary under battle conditions in estimating damage due to hemorrhage, shock, flash burns, and exposure to ionizing radiations. The new method also will be helpful in making routine hospital blood counts and in screening men for military service. Errors in the visual blood counting methods now used are avoided in the new instrument since there is no dilution of the blood and the quantity used is not critical.

BLOOD SERUM TESTING FOR CANCER

A simple and inexpensive method of blood serum testing for diagnosis of cancer has been developed by doctors in the Veterans Administration Hospital, Los Angeles, and was reported recently before the annual meeting of the American Association for Cancer Research in Cleveland, Ohio.

Using a synthetic substance substituted for an antigen obtained from human cancerous liver tissue, the physicians obtained almost identical results when the material came into contact with the blood serum of a person afflicted with cancer. The tests were more than 98 per cent correct in confirming positive cancer diagnoses.

Known as the "seroflocculation reaction," the blood serum method of testing is expected to lead to earlier discovery of cancerous lesions in the lungs and other chest areas.

OPERATIVE MANAGEMENT OF CANCER OF THE COLON AND RECTUM

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SURGICAL attack upon cancerous lesions of the gastrointestinal tract has advanced in the past decade by improved and relatively standardized methods of diagnosis, preoperative preparation, and postoperative care. In spite of these advances, differences of opinion still exist in regard to the surgical removal of malignant lesions of the lower bowel. The most important controversial problems are related particularly to procedures for preservation of the sphincter and the more radical innovations such as routine ligation of the inferior mesenteric artery near its origin from the aorta, with concomitant left hemicolectomy for cancer of the rectum and left colon. The operative management of carcinoma of the colon and rectum will be discussed with special reference to some of these problems exclusive of acute obstruction.

GENERAL CONSIDERATIONS

The factors influencing operability, resectability, and radicality are closely related. The decision as to the operability or resectability of a patient will vary greatly, depending upon the attitude and ability of the surgeon. With the advances in preoperative and postoperative management, supportive measures, and anesthesia, it is seldom that a truly inoperable or nonresectable lesion is encountered. For example, I performed a Miles abdominoperineal resection of the rectum for cancer in an 83 year old Negro man who, when first seen six weeks prior to surgery, had cardiac decompensation with pitting edema of the extremities and a large liver. Previously the growth had been called inoperable. The same procedure was used to remove an extensive carcinoma of the mid-rectum from a 76 year old white woman who weighed only 81 pounds. With attentive preparation most patients can be submitted to one-stage resections. Occasionally, in the aged patient with an advanced lesion, severe weight loss, and marked anemia, or partial obstruction, multiple-stage operations may be necessary. In most instances if one-stage resections cannot be performed, the patient has such advanced disease or physical deterioration that any type of operation, other than a proximal colostomy, is contraindicated.

Resectability cannot be determined unless the patient undergoes exploratory surgery and an aggressive attack is made upon the lesion. Since it is impossible preoperatively to determine the magnitude of a proposed resection for carcinoma of the colon and rectum, the surgeon always should be prepared for extensive procedures. Since malignancies of the lower bowel often remain localized for long periods before they become incurable, minimal involvement of the removable viscera such as small bowel, stomach, spleen, bladder, ureters, or the female pelvic viscera should not preclude resection. Recently, a large carcinomatous lesion of the rectosigmoid involving the terminal ileum and bladder necessitated resection of these structures en bloc with end-to-end anastomosis of the small and large bowel (fig. 1). The patient made an uneventful recovery and was discharged from the hospital on the tenth postoperative day. The presence of a moderate number of liver metastases should not be considered a contraindication to resection, although it is my belief that the palliation obtained in some of these patients has been decidedly questionable. No solitary hepatic nodules amenable to resection have been found since removal of such lesions has been advocated. The experience of others would appear to justify this procedure in selected cases.

Among the contraindications to resection should be included: (1) extensive peritoneal implants; (2) invasion of vital or irremovable structures, such as

FIG. 1. Resected specimen of rectosigmoid containing a large adenocarcinoma and polyp with invasion of the terminal ileum and bladder. Resection en bloc was performed with closure of a bladder defect and end-to-end anastomosis of the ileum and large bowel.

Read before the Section on Surgery, Texas Medical Association, Annual Session, Galveston, May 1, 1951.

the large blood vessels, pancreas, or pelvic wall; and (3) extensive liver metastases with ascites.

The incidence of multiple carcinomatous lesions has been reported as high as 4.6 per cent[5] and the incidence of multiple polyps in bowel specimens removed for cancer was 31.2 per cent in a series reported by Bacon.[4] Undoubtedly, the incidence of multiple lesions of the large bowel of a malignant or premalignant nature is very high. With preoperative proctosigmoidoscopy, barium enema with air contrast, palpation of the bowel carefully at laparotomy, and careful postoperative observation for new growths, subtotal colectomy for solitary cancers of the colon, as advocated recently by Wangensteen,[22] does not seem to be indicated. It is advisable to have the surgical pathologist immediately examine the removed specimen in the operating room. If multiple lesions are noted in the vicinity of the growth, a more careful examination is made of the bowel before the abdomen is closed and a sigmoidoscope passed into the open ends of the bowel before the anastomosis is completed. This procedure also is valuable at the time of colotomy for adenomatous polyps. If other small lesions are encountered, these may be fulgurated or a wider resection performed. The open ends of the bowel can be exteriorized for fulguration of the polyps at a subsequent date.

Wangensteen[22] and Deddish[8] have spoken of the advisability of reentering the abdomen three or four months after the initial operation to remove any remaining cancerous lymph nodes or other visible metastatic nodules. This procedure is not to be recommended until it has been evaluated further. Patients should be observed closely for any evidence of residual disease and occasionally secondary resection may effect worth-while palliation.

Deddish[8] has recommended the routine ligation of the inferior mesenteric artery near its origin and a left para-aortic node dissection for all lesions of the descending colon and proximal sigmoid. For lesions of the midsigmoid he advocated extension of the node dissection to include the right para-aortic, common iliac, promontory, and hypogastric nodes. Deddish expressed the opinion that sufficient metastatic nodes have been found to warrant the use of this technique. Rosi[19] has recommended a similar procedure. Essentially the same operation has been proposed for the treatment of cancer of the rectum and rectosigmoid with extension of the dissection along the aorta to the level of the duodenum. No valid criticism can be leveled at these recommendations since they constitute a logical approach to radical removal of the lymphatic spread along the course of the inferior mesenteric vessels. This should not be employed as a routine technique for resection of malignant lesions of the sigmoid, rectosigmoid, and rectum until there has been a further evaluation of five-year survival rates as compared to the immediate postoperative mortality and morbidity which undoubtedly will be incurred from this procedure.

Routine removal of the female pelvic viscera has been recommended[8] when cancer of the rectum is extirpated, but this is not indicated unless there is probable or evident involvement of these structures. The surgeon should not hesitate to remove them in either event. Frequently, a part or all of the posterior vaginal wall should be removed. Extensive lesions in males may involve the bladder, prostate, or urethra. A large part of the prostate may be removed when it has been invaded by cancer but involvement of the bladder necessitates pelvic evisceration. When the bladder is involved in the absence of liver metastases, peritoneal implants, or invasion of the pelvic walls or sacrum, complete removal of the pelvic viscera should be attempted. This will necessitate bilateral ureterosigmoidostomies and a wet colostomy or bilateral skin ureterostomies. Palliation and five-year survival rates from these procedures are questionable, and they are extremely expensive. Therefore, the economic status of the patient should be taken into consideration before the procedure is attempted. The opportunity to use this procedure for cancer of the rectum has not presented itself.

Recently pelvic evisceration was employed in a patient with rectovaginal and vesicovaginal fistulas secondary to radiation necrosis and carcinoma of the cervix. The only carcinoma found in the removed specimen was localized in the stump of the cervix. Unfortunately, the patient succumbed on the sixth postoperative day to extensive arterial emboli arising in the left ventricle of the heart, blocking both external iliac, superior mesenteric, and right renal arteries. It appears that the procedure was justified since no residual cancer was found at autopsy.

In recent months a number of surgeons have taken a more radical attitude in the treatment of adenomatous polyps of the colon and rectum in which malignant changes have taken place. Scarborough[21] has observed 5 patients with pedunculated adenomas, varying in size from 7 mm. to 2 cm., in whom radical resection revealed carcinomatous invasion of the lymph nodes. Ault[1] removed pedunculated polyps by colotomy from 2 patients who later died of metastatic carcinoma. Such occurrences, although uncommon, indicate the need for a more careful consideration of these adenomatous polyps. So far as possible, in adults these lesions should be examined in entirety after removal by excision, snare, or colotomy. If there are definite carcinomatous changes present, resection of that portion of the bowel and its lymphatic drainage area is indicated. At the time of colotomy, if frozen section study by a pathologist well acquainted with

the problems involved, reveals carcinomatous changes in the polyp, resection should be performed. The importance of the pathologist cannot be overemphasized and his close liaison with the surgeon is essential to competent treatment. In children carcinoma occurs so seldom that Kerr's[14] recommendation of simple fulguration or removal by colotomy of polypoid adenomas has been followed.

SURGICAL TECHNIQUE

Incisions.—Malignancies of the colon and rectum usually are located accurately preoperatively. It is possible, therefore, to plan laparotomy incisions for such lesions advantageously. If widespread multiple lesions are thought to be present, a vertical incision (fig. 2, F-F″) of the paramedian type may be extended to expose the entire colon and rectum. In the majority of patients smaller incisions may be placed in more

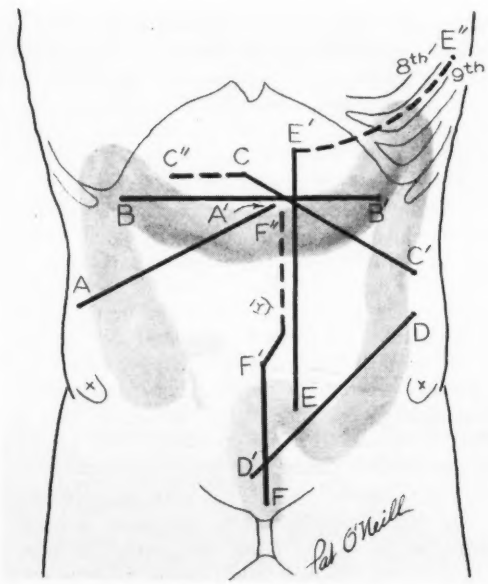

FIG. 2. Diagram indicating the incisions commonly used for removing various portions of the large bowel. *A-A′*, oblique transverse incision; *B-B′*, upper abdominal transverse incision; *C-C′-C″*, oblique subcostal incision; *D-D′*, lower left oblique incision, *E-E′-E″*, left rectus incision with extension into the thorax; *F-F′-F″*, vertical incision of the paramedian type with extension to expose the entire colon and rectum.

advantageous positions for better exposure of a particular part of the colon or rectum. An oblique transverse incision affords excellent exposure for resection of the right colon (fig. 2, A-A′). An upper abdominal transverse incision (fig. 2, B-B′) is ideal for exposing lesions of the transverse colon. This incision may be extended to mobilize the hepatic or splenic flexure. If it becomes necessary during the operative procedure to mobilize the right colon, the right side of the transverse incision may be carried downward and laterally with ease. For lesions of the splenic flexure which are thought to be uncomplicated preoperatively, an oblique subcostal incision (fig. 2, C-C′) affords good exposure. If extension of the growth with involvement of the spleen or stomach is suspected, a left rectus incision may be more advantageous since it can be extended into the thorax (fig. 2, E-E′-E″) or downward for mobilization of the sigmoid colon. Although the descending colon can be removed satisfactorily with a left transverse incision similar to the one used for lesions of the right colon or cecum, in tall thin patients the left rectus incision (fig. 2, E-E′) allows the surgeon more easily to free the splenic flexure and at the same time mobilize the sigmoid colon for an anastomosis with the transverse colon. For lesions of the sigmoid colon a lower left oblique incision (fig. 2, D-D′) will be adequate. If it is necessary to mobilize the splenic flexure during the latter procedure, the oblique incision can be extended upward toward the costal margin. In the majority of instances the upper portion of the rectum also may be freed through this incision without cutting across the lower part of the rectus muscle. A left paramedian incision (fig. 2, F-F′) has been the most satisfactory for radical abdominoperineal resection.

Resection of the colon and rectum is not difficult if careful dissection is carried out with attention to important anatomic structures. Although a detailed discussion of the anatomy involved in removing segments of the large bowel is not possible, the importance of complete mobilization of the bowel prior to any resection, together with transillumination of the mesentery with its contained vessels and lymph nodes should be stressed.

Right Colon.—Little controversy occurs in regard to radical resection of right colonic cancerous lesions since the anatomic arrangement of the bowel has more or less delegated the type of resection which is used for cancer in this location. The amount of bowel to be removed varies slightly with the location of the lesion. In general, lesions of the right colon (fig. 3, AB) necessitate removal of the terminal ileum, cecum, ascending colon, hepatic flexure, and right one-third to one-half of the transverse colon with ligation of the ileocolic, right colic, and right branch of the middle colic vessels as near their origin as possible. Wider resection is limited by the superior mesenteric vessels. When the right colon is involved, resection of 60 to 70 cm. of small bowel has been advocated to insure wider removal of lymphatic drainage area along the course of the ileocolic vessels. In lesions of the cecum (fig. 3, B-B′) this is undoubtedly a wise maneuver. For lesions of the ascending colon it seems advisable to remove at least 20 to 30 cm. of the

terminal ileum. Removal of cancer of the hepatic flexure of the colon usually is accomplished similar to removal of lesions of the ascending colon (fig. 3, A-B). In the majority of cases ligation of the right branch of the middle colic artery is adequate. Occasionally, involved lymph nodes may necessitate complete ligation of the middle colic artery with wider resection of the bowel (fig. 3, A-A′). The resections as indicated in figure 3 automatically accomplish wide removal of the lymphatic drainage area and

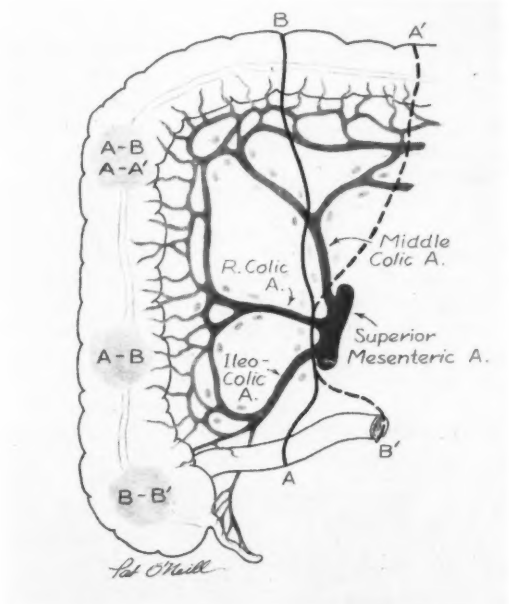

FIG. 3. Diagram showing the usual resection for lesions of the right colon (*A-B*), resection for cecal lesions (*B-B′*), and resection for hepatic flexure lesions (*A-B* and *A-A′*).

perhaps account for the higher five-year survival rates obtained in patients with cancer of the right colon than in patients with cancer of the left colon. This survival record probably has resulted in the present concept of left hemicolectomy for cancer of the upper rectum, rectosigmoid, and left colon.

Although cancers of the right colon grow to be very large and are palpable in approximately 70 per cent of the patients prior to surgery, involvement of contiguous structures is not encountered often. Occasionally a portion of the duodenum or small bowel may become involved with the mass and necessitate removal of the involved portion of that particular organ. Rarely do these lesions penetrate the fusion fascia posterior to them and involve the kidney or right ureter. Care should be exercised to prevent injury to these latter structures as well as to the ovarian or spermatic vessels, inferior vena cava, and superior mesenteric artery and vein.

Transverse Colon.—Radical removal of the transverse colon is not as difficult as removal of other parts of the large bowel since radical resection is limited by the length of the middle colic artery, which originates from the inviolable superior mesenteric artery. It is easy to exteriorize the usually mobile transverse colon, but for radical removal of this part of the bowel it is necessary to ligate the middle colic vessels and mobilize one or the other, or both, of the adjacent flexures depending upon the location of the lesion and variability of the blood supply (fig. 4, A-B). The gastroepiploic nodes and omentum should be resected routinely, care being taken not to injure the superior mesenteric vessels.

By virtue of the proximity of the splenic flexure to the spleen, diaphragm, stomach, and tail of the pancreas, as well as the tendency for lesions in this part of the bowel to perforate and involve these structures, radical resection of growths in this area often necessitate an extensive resection with removal of the involved viscera. Resection of the splenic flexure commonly entails ligation of the left branch of the middle colic and ascending branch of the left colic vessels (fig. 4, C-D). Since the lymphatic drainage of this area principally follows the middle colic vessels, it

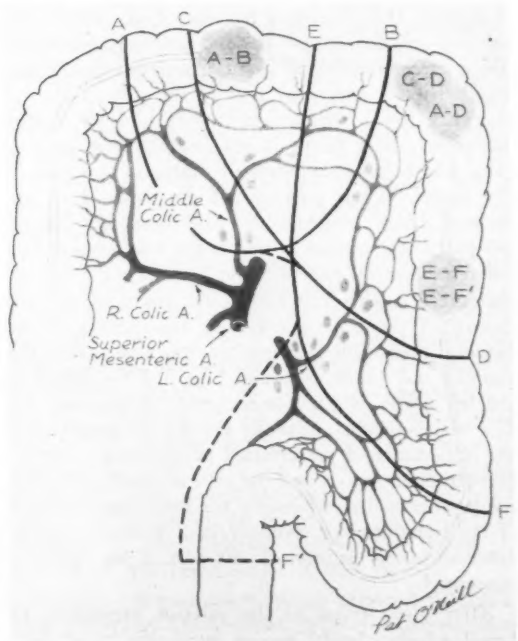

FIG. 4. Diagram showing the usual resection for lesions of the transverse colon (*A-B*). Also shown is the usual splenic flexure resection (*C-D*) and possible resection when ligation of the middle colic vessel is necessary (*A-D*). The usual resection for lesions of the descending colon (*E-F*) and possible resection if ligation of the inferior mesenteric vessels is necessary (*E-F′*) also are indicated.

may be necessary to ligate the main trunk of these vessels to remove the involved nodes. In this event a wider resection of transverse colon may be necessary (fig. 4, A-D). Attention should be called to the presence of an aberrant vessel (probably a branch of the splenic artery) which is found frequently in the splenocolic ligament.

Descending Colon.—Resection of the descending colon for carcinoma in most instances necessitates mobilization of the splenic flexure and sigmoid colon. The left colic vessel usually is ligated just distal to its origin and the bowel is resected from above or in the vicinity of the splenic flexure to the midsigmoid (fig. 4, E-F). Infrequently a lesion in this location may involve nodes near the origin of the inferior mesenteric vessel and ligation of this artery is required, but this procedure is not employed routinely. If the ligation is necessary, the upper portion of the rectum must be mobilized and the anastomosis of the bowel made between the proximal portion of the left colon and the upper part of the rectum or rectosigmoid (fig. 4, E-F'). This requires mobilization of the left side of the transverse colon.

Sigmoid Colon.—The sigmoid colon is frequently so redundant that a minimal amount of mobilization enables it to be exteriorized with relative ease. Undoubtedly, this procedure has encouraged inadequate removal of the lymph node containing mesentery. Since carcinoma occurs more frequently in the sigmoid than in any other part of the left colon, this tendency toward inadequate removal of the lymph nodes may be a factor in the low five-year survival rates which follow removal of cancer in this part of the bowel. When resection of the sigmoid is performed, it is preferable to mobilize completely the upper part of the rectum as well as the lower descending colon for accurate exposure and ligation of the inferior mesenteric vessels just below the origin of the left branch of the colic artery. The anastomosis of the bowel is then made between the upper portion of the sigmoid and the rectosigmoid (fig. 5, E-F). Injury to the left ureter, ovarian or spermatic vessels, and the iliac vessels must be carefully avoided. Emphasis upon the importance of preservation of the intact superior hemorrhoidal vessels and the critical point of Sudeck has been partially responsible for inadequate removal of the sigmoid colon. Neither is of practical significance so far as excision of this part of the bowel is concerned.

After interruption of the inferior mesenteric or superior hemorrhoidal vessels retrograde blood flow from the middle hemorrhoidal vessels usually will nourish the distal 4-5 cm. (and possibly more) of the sigmoid colon (rectosigmoid) and the upper portion of the rectum. In one patient, when the inferior mesenteric artery was ligated above its left colic branch, adequate blood supply to the upper part of the sigmoid (fig. 5, E) was supplied through the terminal arcade from the middle colic vessels. Ault[2] has had the same experience in 5 patients. Occasionally, all of the visible and palpable lymph nodes can be removed without interrupting the superior hemorrhoidal or inferior mesenteric vessels (fig. 5, C-D). With the recent trend toward more radical resection of the left colon the latter procedure has been abandoned to accomplish wider removal of the mesosigmoid. The left colic artery may be left intact unless lymph nodes are palpated above its origin from the

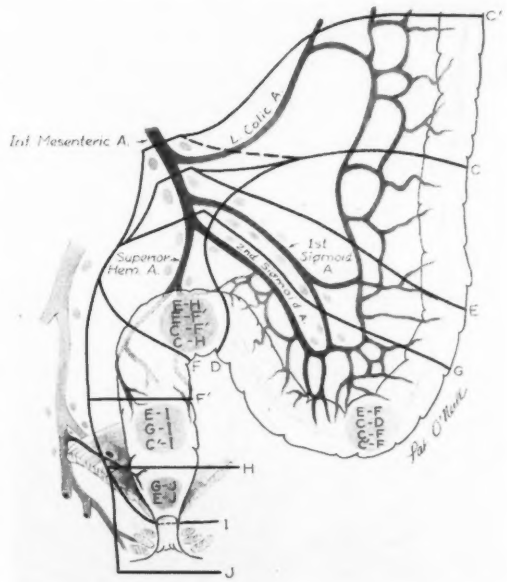

FIG. 5. Diagram showing the usual resection for sigmoid lesions (*E-F*) and other possible anastomoses following resection of the sigmoid, depending upon the extent of resection and the blood supply (*C-F* and *C'-F*). An inadequate sigmoid resection is noted (*C-D*). Also shown are the usual resection for lesions of the rectosigmoid (*E-F* and *E-H*) or if ligation of the inferior mesenteric artery above the left colic artery is necessary (*C-F'* or *C-H*); the usual resection for lesions of the mid-rectum (abdominoperineal proctosigmoidectomy) (*E-I*); and resection for lesions of the lower rectum (Miles type) (*G-J* or *E-J*).

inferior mesenteric artery. In this event high ligation of the latter vessel should be carried out. Complete mobilization of the entire left colon may be necessary. The anastomosis will be made between the proximal portion of the left colon and the upper part of the rectum or rectosigmoid (fig. 5, E-F, C-F, C'-F), depending upon the variability of the blood supply.

Rectosigmoid and Upper Rectum.—The type of resection which is to be employed for cancer of the rectum and rectosigmoid should not be decided upon until the abdomen has been opened, the liver and the entire colon palpated carefully, the bowel com-

pletely mobilized, and the mesentery with its vessels and lymph nodes carefully examined. For lesions in the upper rectum and rectosigmoid 12 to 22 cm. from the anorectal line (14 per cent in my series) the proximal line of resection should be placed just below the origin of the left colic vessel. The bowel and its mesentery should be divided at least 6 cm. below the growth since occasionally distal spread reaches this level. This may place the anastomotic site as low as 6 cm. or as high as 16 cm. from the anorectal line (fig. 5, E-H or E-F′). In either event, it may be necessary to mobilize completely the lower rectum by dividing the rectal stalks and the middle hemorrhoidal vessels. Although the inferior hemorrhoidal vessels usually provide adequate nourishment for this part of the bowel, viability of the rectal stump should be tested by removing the clamps before the anastomosis is performed. High ligation of the inferior mesenteric vessels above the origin of the left colic artery should be reserved for the patients with enlarged lymph nodes. If the nodes can be removed without interfering with the left colic vessels and frozen sections reveal no metastases, the inferior mesenteric artery is divided as usual below the left colic artery (fig. 4, E-F′). If it is necessary to divide the inferior mesenteric vessels proximal to the origin of the left colic artery, as has been stated previously, it may be necessary to mobilize the entire left colon and the anastomosis must be made at a higher level depending upon the variability of the blood supply to the left colon (fig. 5, C′-F′, C′-H, C-F′, C-H) and the location of the lesion.

Lower Rectum.—If, however, anterior resection and anastomosis is attempted for lesions 6 to 12 cm. above the anorectal line, it is impossible to remove an adequate segment of bowel and mesentery below the growth without placing the anastomotic site at such a level that the anastomosis is technically difficult or impossible. The operation of abdominoperineal proctosigmoidectomy or pull-through allows the surgeon to remove all of the bowel below the level of the lesion in this area and also a satisfactory segment of the lateral rectal stalks and the levator muscles (fig. 5, E-I) (26 per cent of my patients) while at the same time removing an equal amount of proximal mesentery and bowel.

The abdominal phases of the pull-through operation and the Miles resection should be accomplished in essentially the same manner although in the former procedure the terminal arcade and bowel are not divided. Occasionally for low lying growths the mesentery may be divided below the first sigmoidal vessel if more mobility is needed and there are no nodes palpable or visible above that area (fig. 5, G-I). Recently, the latter compromise has been abandoned. If ligation of the inferior mesenteric artery above the left branch of the colic artery is necessary, the left colon can be completely mobilized for anastomosis, colostomy, or transplantation to the perineum (fig. 5, C′-I). As a safeguard to radical resection, bowel viability, and closure of the pelvic peritoneum, in recent cases the abdomen has been left open at the conclusion of the abdominal phase, the patient placed in lithotomy position, and the surgical team divided. The abdominal and perineal phases are concluded simultaneously and after radical resection, if adequate viable bowel does not remain for the pull-through, a colostomy is performed. Anastomoses can be accomplished from below through the dilated muscle by the same technique with preservation of the lower 3 to 4 cm. of the rectum, which is essential to relatively normal bowel function.

Wider excision of the ischiorectal fat, levator muscles, and the rectal stalks can be accomplished by means of the Miles abdominoperineal operation (60 per cent of my patients) (fig. 5, G-J). This operation is used in the presence of large rectal growths with palpable nodes and for lesions 6 cm. or less from the anorectal line and should include a thorough dissection of the internal iliac, iliac, and promontory nodes. Frequently in performing the Miles operation, the lateral rectal stalks and levator muscles are detached in close proximity to the rectum, completely defeating the purpose of the wide exposure obtained in the perineal phase. The blood supply often is divided blindly below the first sigmoidal vessel (fig. 5, G-J), but, with more adequate visualization by transillumination, the inferior mesenteric artery should be divided above the first sigmoidal vessel (fig. 5, E-J). The proximal resection is often less radical than a correctly executed pull-through procedure (fig. 5) or anterior resection.

Mobilization of the rectum is not difficult if dissection is kept in the proper anatomic planes. It is important to identify both ureters and to incise the rectovaginal or rectovesical peritoneum at the proper level. Ligation of the middle hemorrhoidal vessels is not always necessary but it is advantageous as a routine. In performing the Miles procedure in obese patients, the ligation usually is done from below to insure wider removal of the lateral zone of spread. When low rectal lesions are present, the peritoneum should be stripped from the lateral pelvic walls to expose more adequately the internal iliac vessels for removal of the lymph nodes in that area.

In poor risk patients with low growths, the Lockhart-Mummery, Dixon-Jones, or Hartman procedure may be used.

Reestablishment of Bowel Continuity.—Discussion of the operative management of cancer of the lower bowel would be incomplete without a few remarks in regard to the reestablishment of bowel continuity

following removal of such lesions. During the past five years there has been a definite trend away from multiple-stage operations in favor of one-stage primary resection and anastomosis. The latter procedure followed by the open end-to-end anastomosis with two rows of interrupted sutures has proved satisfactory. With the exception of an occasional case in which there is extensive infection or contamination during the operative procedure, or very edematous bowel from long standing partial obstruction and excessive fecal residue, exteriorization or the Mikulicz-Bloch type of resection has been abandoned almost completely. Even after resection of the right colon end-to-end anastomosis is preferable in most patients. If interrupted sutures are used for the entire anastomosis, a larger stoma is obtained. Disparity of the bowel ends can be corrected by applying the clamps at an angle across the bowel when it is divided. Although the end-to-side ileotransverse colostomy is preferred by some physicians following resection of the right colon and a lateral anastomosis is used by others, reports[13] still are appearing in the literature in regard to the complications following these types of anastomosis. Some surgeons still advocate use of the closed type of anastomosis and recently excellent evidence was brought forth by Pearson and O'Neill[18] in favor of this technique. In view of the incidence of local recurrence following bowel resection, particularly very low anterior resection of the rectum, and also following contamination when a growth is broken into during removal, a question about the possibility of local contamination with cancer cells following open anastomoses arises. If such contamination is of significance, the closed type of anastomosis would be preferable following all resections of the large bowel for cancer.

The Miller-Abbott or Cantor tube has been used with great satisfaction as an adjunct to primary resection and anastomosis. The tube is passed during the twenty-four hour period prior to surgery and is allowed to remain in place in the small bowel postoperatively until peristalsis is reestablished and usually until the patient has a bowel movement. The tube is thought to be an unnecessary adjunct by some surgeons, who prefer to use simple gastroduodenal suction. The latter method has been used recently in two anterior resections of the rectum and after a right colectomy without complications. Others still institute complementary cecostomy or, if the anastomotic procedure has taken place in the sigmoid or rectosigmoidal area, a transverse colostomy is sometimes performed simultaneously. Mayo[17] recently compared the mortality rates and postoperative morbidity in a series of patients upon whom anterior resection with complemental transversostomy was performed, with a similar series in which no proximal enterostomy was used. The mortality was 3.3 per cent in the latter group, as compared with 4.5 per cent in the former group. The morbidity was markedly decreased in the group without complemental enterostomies. Crile[7] has reported recently a series of 90 consecutive primary resections with anastomoses without a fatality and without adjunctive enterostomies.

DISCUSSION

With the wide extension of operability, resectability, and radicality, surgeons must be careful in instituting and severely critical in evaluating results obtained from the extensive palliative and radical surgical procedures. Results are unpredictable and sometimes disappointing, but in selected cases worth-while palliation may be obtained from resection in the presence of hepatic metastases or extensive local invasion. Evidence in the literature thus far does not appear to warrant routine use of the more radical procedures such as left hemicolectomy and para-aortic node dissection for cancer of the left colon and rectum, delayed reentry into the abdomen for secondary removal of involved lymphatics, or subtotal colectomy for solitary malignancies. When dealing with potentially curable malignancies, the importance of an aggressive and conscientious effort to remove widely the lesion and its possible avenues of spread, including locally involved removable viscera, cannot be overemphasized.

There is general accord in regard to the removal of lesions of the colon above the lower sigmoid. A personal preference has been expressed for primary resection and anastomosis without complemental enterostomy. This procedure seems to be in agreement with the present consensus regarding the management of such lesions.

In spite of the introduction of more radical procedures, any discussion of the surgical treatment of cancer of the rectosigmoid and rectum still revolves around the controversial subject of preserving bowel continuity. The revival of operations to preserve the sphincter and the use of anterior resection for the treatment of cancer of the rectum and rectosigmoid has caused as much controversial discussion as any other subject in surgery. The method of attack which has been proposed for the treatment of cancer of this part of the bowel has included the use of anterior resection and the pull-through operation in selected cases. In substantiation of this contention it is necessary to review a few pertinent facts in regard to functional results, extent of proximal resection, lymphatic spread, and five year survival rates.

Although colostomies function well, experience with the procedures to preserve the sphincter has proved that a perineal anus is to be preferred both from a psychologic and functional standpoint. Critics

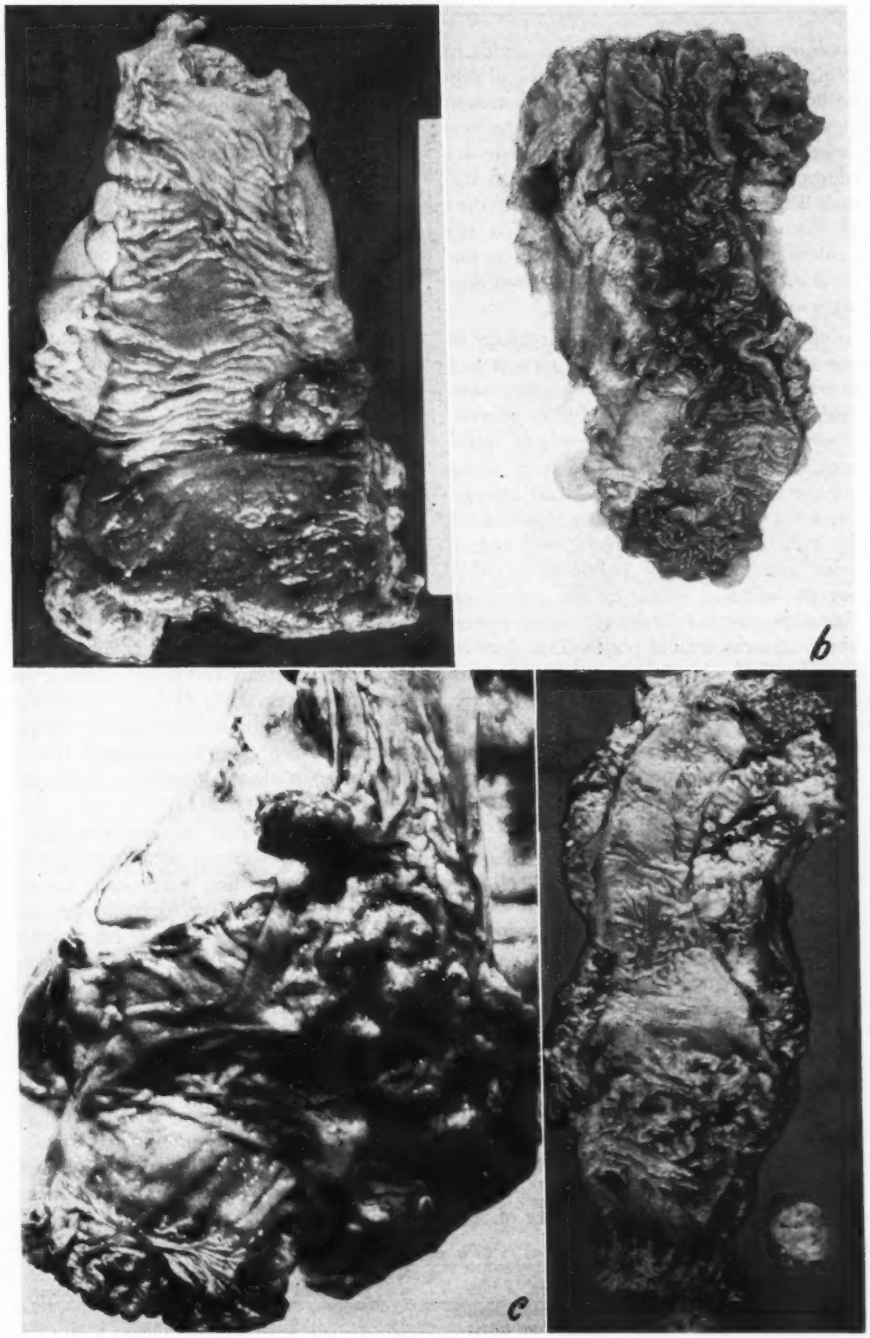

FIG. 6a. Papillary adenocarcinoma of the rectum located 10 cm. from the anorectal line and removed by abdominoperineal proctosigmoidectomy or "pull-through." The majority of this tumor was benign. There was no spread outside the bowel wall.

b. Adenocarcinoma of the rectosigmoid located 20 cm. from the anorectal line and removed by anterior resection with low end-to-end anastomosis.

c. Adenocarcinoma of the rectum and an associated benign polyp located 10 cm. from the anorectal line and removed by Miles abdominoperineal resection because of obesity of the patient, shortness of the sigmoid colon, and possible lateral extension of the lesion.

d. Papillary adenocarcinoma located 6 cm. from the anorectal line and removed by a Miles abdominoperineal resection although biopsy specimens were benign. A large involved node also is shown.

of the procedures have contended that, in order to preserve adequate blood supply for the proximal segment of the bowel, an inadequate amount of mesentery is removed. Actually, in most patients the vessels and mesentery are divided at the same site for both procedures, just below the left colic or first sigmoidal vessel. The perineal anus is then established at relatively the same point in the sigmoid as the abdominal colostomy (fig. 5, E-I, E-J). This is not always possible because of variations in the blood supply and length of the sigmoid colon.

Many excellent studies have been undertaken in regard to the lymphatic drainage of the rectum and with minor differences most of these studies have arrived at essentially the same conclusions. In general, lymphatic drainage of the upper rectum and rectosigmoidal area is upward from node to node along the course of the superior hemorrhoidal and inferior mesenteric artery (fig. 5). Infrequently, uninvolved nodes can be found between the growth and higher involved nodes. The presence of visible or palpable nodes is not an accurate index to the extent of lymphatic invasion since microscopic involvement may exist above any discernible nodes. The absence of palpable nodes and also microscopic cancer, as revealed by frozen section, are evidence against higher lymphatic involvement. These have been used as a guide to the limitation of resection. However, when mesocolic nodes are palpable, the widest possible practical resection should be attempted. No conclusive evidence that distal spread from cancer of the rectum occurs with significant frequency has been found. Occasionally the larger growths (not more than 1 per cent) will metastasize as far as 6 cm.[11] below the distal border of the growth. The excellent work of Grinnell[12] recently has corroborated previous observations in regard to the lymphatic spread of cancer of the colon and rectum. Bacon and Sauer[20] have shown that in the presence of large lesions situated near the levator muscles (at or below the second rectal valve —Kohlrausch's plica—usually at or below 6 to 9 cm. from the anal margin or 3 to 6 cm. from the anorectal line) lateral spread does take place along the course of the middle hemorrhoidal vessels (fig. 5) to the internal iliac nodes.

Attention[10] has been called to the high rate of recurrence and lowered five-year survival rates which attend removal of cancers below the peritoneal reflection (table 1). These figures are offered as support of the theory that lower rectal cancers below that level are more malignant and should be removed by the Miles technique. The investigations of Kirklin and Waugh[15] do not support this theory (table 1). The location of the peritoneal reflection is variable and its use as a landmark for the lower limits of anterior resection is not logical. The distance of the lesion from the anorectal line (the anal margin is too variable), its size, its relation to the levator muscles, and possible involvement of contiguous pelvic structures appear to be more accurate guides to the routes of lymphatic spread and their radical removal.

Since advocates of the procedures for preservation of the sphincter apply the Miles or a similar technique to the lowest rectal malignancies, their critics contend that five-year survival rates following sphincter preservation operations would necessarily be from a selected series and the results would not be comparable to any series in which all of the rectal malignancies had been removed by the Miles abdominoperineal operation exclusively. Regardless of this observation and even on a selected basis, the five-year results obtained by Dixon[9] following anterior resection of the rectum are excellent (table 1). Following abdominoperineal proctosigmoidectomy or the pull-through operation, Bacon[3] also has obtained five-year results comparable to those quoted by proponents of the Miles procedure (table 1).

It would appear that carcinomatous growths of the rectum and rectosigmoid occurring more than 6 cm. above the anorectal line theoretically are amenable to preservation of bowel continuity without compromising radicality. A large number of patients (40 per cent in my series) will fall into this category since only 14.2 per cent of malignant lesions of the rectum and rectosigmoid occur less than 6 cm. from the anorectal line.[3] Unfortunately, all patients with cancerous growths above the 6 cm. level cannot be submitted to a sphincter preservation operation. In the presence of large growths with palpable nodes or local extension, in obese patients, or in patients in whom insufficient viable bowel remains following radical resection (without mobilizing the entire left colon), a permanent colostomy is necessary. The Miles opera-

TABLE 1.—*Five-Year Survival Rates in Cases of Carcinoma of the Rectum and Rectosigmoid.*

Author	Type of Operation	Patients	Survival (%)	Metastasis to Lymph Nodes (%)
Dixon[9]	Anterior resection of rectum and rectosigmoid	272	67.7	
Bacon[3]	Abdominoperineal proctosigmoidectomy	761	52.6	
Mayo[16]	Miles resection (with permanent colostomy, 133)	285	55.8	
Cattell[8]	Miles resection (with permanent colostomy, 140)	420	53.6	
Kirklin, Dockerty, and Waugh[15]	Miles resection			
	Intraperitoneal lesions	57	54.4	36.4
	Extraperitoneal lesions	64	59.4	
Gilchrist and David[10]	Miles resection (intraperitoneal lesions)	28	65.4	51.4
	Obstruction resection (intraperitoneal lesions)	27	51.4	
	Miles resection (extraperitoneal lesions)	112	51.8	37.5

tion should be used invariably for lesions 6 cm. or less from the anorectal line. Since growths below the 6 cm. level probably metastasize along the middle hemorrhoidal vessels to the internal iliac nodes, radicality must be aimed at removal of the lateral end proximal lymphatic drainage areas as well as the anorectal and ischiorectal tissues.

SUMMARY

The factors which influence operability, resectability, and radicality in the operative management of cancer of the colon and rectum are given general consideration.

The technique of removing the various portions of the large bowel including the incisional approach and the relation of important anatomic landmarks is considered. The importance of radical resection is emphasized. The preferred limits of resection are delineated with particular emphasis upon the removal of lesions in the rectum and rectosigmoid. The importance of high ligation of the inferior mesenteric vessels also is pointed out. Reestablishment of bowel continuity is discussed and the author's preference for one-stage primary resections indicated.

A general discussion of bowel continuity with special emphasis upon various procedures which have been employed in the treatment of cancer of the rectum and rectosigmoid concludes this presentation.

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Medical Arts Building.

ABSTRACT OF DISCUSSION

DR. ROBERT M. MOORE, Galveston: There are many controversial phases of the subject as Dr. Rowe has stated. I am in agreement with most of his interpretations; in two specific regards, however, I wish to present the opposite side of the argument.

Dr. Rowe stated that with attentive preparation most patients can be submitted to one-stage resections. This is certainly true if one excepts certain patients with intestinal obstruction as a result of the cancer. Dr. Rowe explained that he was excluding from his discussion the problems of acute colonic obstruction. I think it is also important to exclude from the one-stage resection certain of the cases of chronic intestinal obstruction.

Not rarely a physician receives a patient with tremendous abdominal distention resulting in an enormous, tense abdomen. The patient may be very ill. Sometimes, with intermittent relief which has been only partial, the condition has been advancing in bouts for weeks. A flat plate of the abdomen reveals a greatly distended small intestine as well as large intestine. I recall a number of such instances in sigmoid cancer when a proximal colostomy seemed the only choice and when one-stage resection would have been physically impossible unless at the operating table the surgeon could empty the intestinal tract throughout its entire length by some form of operative intubation. I mention this last possibility because it is a maneuver which has been practiced with good result by a few experienced surgeons. However, I have thought some of my patients too ill to withstand this amount of manipulation.

After doing a proximal colostomy, it is true that the physician is apt to find an incurable, extensive carcinoma when he explores the abdomen ten days later. However, the carcinoma may well be resectable with excellent palliation for twelve to eighteen months. I recall a few such patients whose carcinoma was not particularly advanced and in whom five-year cure resulted.

I should place some of these advanced chronic obstructions ahead of some of the acute colonic obstructions in the matter of demanding a two-stage procedure. The patients have had longer to become sick. In the true acute case it is not rare to find on the roentgenogram of the abdomen that the distention is limited to the colon. Although the colon is immensely dilated, the small intestinal loops are not yet involved. In other words, there is a competent ileocecal valve and a closed-loop obstruction between it and the sigmoid tumor. There has not yet been time for appreciable accumulation in the small intestine above the valve; what vomiting has occurred has been reflex vomiting. I recall 2 such recent patients in whom the sigmoid obstruction had become complete less than twenty-four hours before operation. Such a patient may not have had time to become seriously disturbed in the way of electrolyte imbalance and dehydration. At

operation the distention of the colon sometimes is found to be entirely gaseous. Careful aspiration of the colon at one point by a needle attached to the sucker may effect an immediate collapse of the entire organ. In such early acute obstructions I believe it is much safer to proceed with a one-state resection than in certain of the chronic, intermittent obstructions where the small intestinal loops also have become distended.

The question of the utility of sphincter-preserving operations in rectal cancer raises an old debate. It is my impression that always a fair majority of the older, most experienced surgeons have come to the view that when the carcinoma lies significantly below the peritoneal reflection a procedure at least as radical as the Miles operation should be performed. The studies of lymphatic metastasis reported by Coller and his associates in 1940 and by Gilchrist and David in 1938 and in 1947 demonstrated that retrograde spread downward toward the anus is possible but not common, but that lateral spread at the levator level occurs in more than 10 per cent of cases. Consequently in many quarters there has been increasing emphasis upon wide resection of the rectal stalks and upon a general enlargement of the traditional abdominoperineal operation.

To me, the remarks of David, Jones, Dixon, and Gilchrist in discussing a recent paper on sphincter preservation* portray well the view of many older surgeons that in the lower lying cancers the operative procedure should be made more radical than the Miles operation rather than less radical. In lesions at or above the peritoneal reflection, however, anterior resections are excellent operations providing the lymphatic extension is not unusually advanced. As to the pull-through type of operation, some find that sphincter control is far from ideal in many of the patients.

Proper procedure in carcinoma some centimeters above the sphincter has long been a subject of great dispute. Too often series have been compared which have not been comparable. A trustworthy comparison awaits standardization not only as to the level of the lesion, but also on the grounds of (1) resectability rate in the clinic concerned, (2) microscopic classification of the tumor, (3) detailed study of lymph-node involvement, and (4) information as to whether the particular group is selected or nonselected.

DR. ROWE, closing: I did not want to give the impression that I favor performing primary resections upon patients with any significant degree of obstruction. Patients such as Dr. Moore has described, although they have had partial or complete obstruction for some time, fall into my category of acute large bowel obstruction. I concur with Dr. Moore that these patients should have a proximal enterostomy (and in most instances a proximal transverse colostomy) before resection is attempted.

In conclusion, I would like to emphasize that, although I have employed the sphincter preservation procedures in selected instances, approximately 60 per cent of my patients have been subjected to the Miles one-stage abdominoperineal resection.

*Best, R. R., and Blair, J. B.: Sphincter Preserving Operations for Rectal Carcinoma as Related to Anatomy of Lymphatics, Ann. Surg. *130*:538-556 (Sept.) 1949.

RECENT ADVANCES IN PROCTOLOGY

JOHN McGIVNEY, M.D., Galveston, Texas

ANORECTAL diseases are no longer thought of as static entities but as progressive lesions which proceed through distinct stages of development before reaching pathologic maturity. The type of treatment for each disease should vary properly with each stage of development; otherwise, therapeutic failure is almost certain. It is important, then, that treatment be preceded by a careful analysis of the stage of the disease. Through this analysis the physician gains a therapeutic yardstick which will enable him to know when conservative management of these diseases should be abandoned in favor of surgery.

It is the purpose of this paper to outline the various stages of the four most common anorectal diseases and to indicate the proper treatment for each. These diseases are anal fissure, hemorrhoids, anorectal infection, and pruritus ani.

ANAL FISSURE

Anal fissure is the intermediate stage of a series of lesions. It begins as an abrasion and usually terminates in an ulcer. The three stages of anal fissure are described in the following section.

Anal abrasion is the first stage. Many persons, including infants, children, and adults, have congenitally small anal canals. In others, contracted anal canals follow anorectal surgery or chronic infection in the crypts. Anal stenosis results from this narrowing of the diameter of the anal canal. Because of stenosis, whether congenital or acquired, patients usually have considerable difficulty associated with their bowel movements. When the stools are large and hard, they produce cracks and abrasions of the anoderm. These abrasions frequently are multiple and occur more frequently in the anterior or posterior commissures of the anal canal. They are often seen in infants and children and are frequently mistaken for anal fissures, but close examination reveals that they do not extend entirely through the skin and are not accompanied by induration of the surrounding tissues. Anal abrasions produce a stinging type of pain after bowel movements and an occasional smear of blood on the toilet tissue. In infants there is crying at stool and constipation.

It is important that silver nitrate not be applied

From the Department of Surgery, University of Texas Medical Branch.

Read before the Section on General Practice, Texas Medical Association, Annual Session, Galveston, May 1, 1951.

to anal abrasions for this procedure will surely extend the lesion through the skin and transform it into a chronic fissure. Proper treatment consists of the application of a surface anesthetic such as Americaine liquid to the surface of the anal canal followed by gentle dilatation with the gloved finger. Cod liver oil ointment is massaged into the anoderm and the excess removed. The stool is softened by administering a demulcent agent such as Hydrocil and by increasing the water intake. In infants, the water intake may be increased by altering the formula and the Hydrocil may be added to the cereal.

Superficial anal fissure (fig. 1) is represented by a single linear separation of the tissues of the anal canal extending through the skin. There is usually a low grade infection and a slight induration of the base and edges of the lesion. Superficial anal fissures are usually seen in the posterior midline of the anal canal but occasionally are found anteriorly, especially in women. They produce sharp pain after the passage of a stool and a small amount of blood on the toilet tissue or in the toilet water. Habit time is usually disturbed with a resulting constipation which further aggravates the disease. Frequently pain is referred to the urogenital system, the lower part of the back, and the backs of the limbs. Relief of symptoms may be obtained in some cases by digital dilatation of the anal canal and softening of the stool, but the lesion is almost certain to return with the passage of the first large stool. Surgical excision with correction of the existing anal stenosis is usually required for a permanent cure.

Chronic anal ulcer (fig. 1, inset) is the terminal lesion of the series. A great transformation has taken place. The lesion is circular or oval and frequently extends to the muscle layer of the anal canal. Its location is the same as that of the fissure but its edges are more indurated and frequently undermined. Above it is usually seen a hypertrophied papilla and behind this papilla a deep infected crypt may extend outward under the ulcer. External to the ulcer is seen a skin tag, which is the result of the chronic edema and fibrosis which surrounds the ulcer. This combination of lesions makes up what is known as the triad of anal ulcer.

The pain of anal ulcer occurs not only during and immediately after the passage of a stool but is prolonged over a period of hours. There is a slight amount of bleeding with the stool and on the toilet tissue, constipation, and a purulent discharge from the surface of the ulcer and from the depths of the infected crypt. Referred pains are frequent.

The treatment of anal ulcer is aimed at excision of the ulcer and its dense fibrous tissue base, the accompanying skin tag, the hypertrophied papilla, and the underlying infected crypt. These lesions are excised together and an incision carried through a part of the subcutaneous portion of the external sphincter muscle in the posterior midline to relax the orifice. Thus the anal stenosis is corrected. The criterion for the correct dimensions of the anal canal is the ability to pass an anoscope 1 inch in diameter through the canal without tearing the tissues. The anal canal is reconstructed by fixing the free mucous membrane at the upper border of the divided subcutaneous portion of the external sphincter muscle with interrupted sutures of 0 chromic catgut. Diligent postoperative dilatation to maintain the diameter of the anal canal must follow for at least forty-five days.

HEMORRHOIDS

External hemorrhoids, simply stated, are subcutaneous hematomas or varicosities occurring below the anorectal line and in the external hemorrhoidal plexus. Treatment is by excision if they are large and painful.

Internal hemorrhoids are redundant pouches of rectal mucous membrane containing a plexus of venules of the superior hemorrhoidal plexus surrounded by a varying amount of fibrous tissue. Internal hemorrhoids occur in three primary groups in the lower part of the rectum: left lateral, right anterior, and right posterior. Small secondary groups may develop from these parent groups (fig. 2).

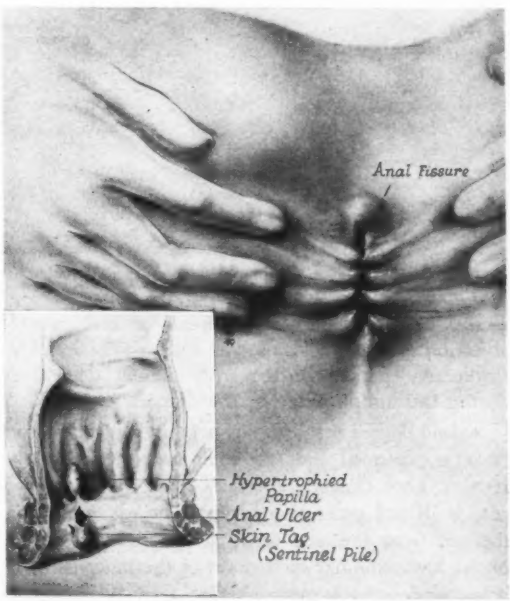

FIG. 1. Diagrams illustrating anal fissure and (inset) anal ulcer.

Here again, this type of anorectal disease undergoes three stages of development. Internal hemorrhoids

are designated as first, second, and third degree in the order of their development.

First degree hemorrhoids are those uncomplicated yet by protrusion, strangulation, or ulceration. The only subjective symptom is bleeding. Rarely bleeding occurs from a ruptured venule on the surface of the hemorrhoid but more frequently from the traumatized mucous membrane which overlies the hemorrhoid.

If there is any place in the treatment of internal hemorrhoids for such nonsurgical methods as injection, it is in the instance of first degree internal hemorrhoids. Multiple injections of a sclerosing substance (preferably nonoily) at the upper pole of the hemorrhoids will certainly stop the bleeding and may obliterate the small masses. We use Sodium Sotradecol, beginning with 0.3 cc. at the first in-

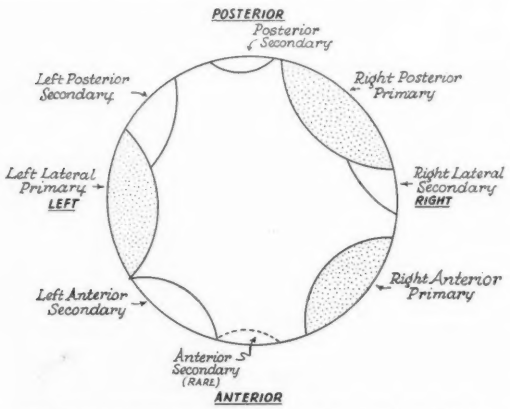

FIG. 2. Chart showing the distribution of internal hemorrhoids.

jection and increasing the amount of each weekly injection until 1.6 cc. is used as a sixth injection. Unfortunately, patients infrequently present themselves during this simple stage of the disease.

Second degree hemorrhoids begin when the tumors become expanded and lose their support within the rectum. They dissect the tissues from the rectal and anal walls and protrusion begins. The squamous epithelium from the anal canal grows over the tumor, or the low columnar epithelium of the mucous membrane undergoes a metaplasia to form a protective covering, reducing the incidence of bleeding. Surgical removal is the only treatment for second degree hemorrhoids.

Third degree hemorrhoids are usually complicated. The protrusion now becomes almost continuous unless the masses are reduced manually. Occasionally several of the masses become injured while protruded and begin to swell, strangulating the tissue with resulting infection and ulceration. Pain then becomes a part of the picture. Surgical excision is the only treatment which should be considered.

Many surgical techniques are used in the removal of hemorrhoids. Any one which removes the diseased tissue completely with a minimum of trauma to the normal tissue should give satisfactory results. Careful attention should be given to the anatomic details in each case. In patients with short anal canals hemorrhoids and normal mucous membrane tend to prolapse more readily; therefore, in such patients it is necessary to pull the redundant mucous membrane down with the hemorrhoids and include it in the excision. This inclusion prevents a recurrence of the protrusion which patients interpret as a return of the hemorrhoids. On the other hand, if too much tissue is removed, anal stenosis, anal abrasions, and chronic pain result.

ANORECTAL INFECTIONS

Anorectal infections also pass through three stages to terminate in a fistula. These stages are cryptitis, perianal and perirectal abscesses, and anorectal fistula.

Cryptitis, the first stage, is marked by crypts hyperemic at their margins and much more prominent than those ordinarily seen. Pressure upon or probing into these crypts will usually obtain a drop of serous exudate. The papillae usually become involved by the same infection so that they are hypertrophied. If the infection is confined to the crypt, a daily Sulfamylon suppository or the instillation of nonirritating substances such as Furacin liquid or bacitracin solution will resolve the infection, but if the deep glands of the crypts are involved and suppuration has occurred, excision of the involved crypts on a hooked probe, along with the hypertrophied papillae, is necessary for cure. The infection if untreated may remain chronic and localized for a considerable time.

Abscess formation, the second stage, results from an extension of the infection in various directions as follows:

1. It may extend beneath the transitional skin of the anal canal superficial to the perianal muscles.
2. It may force its way through the body of the external sphincter muscle.
3. It may burrow through or under the internal sphincter muscle to form a pelvirectal or retrorectal abscess.
4. It may spread upward in the submucosa to form a submucosal abscess.

Abscesses are classified according to their relationship to the levator ani muscle: (1) infralevator abscesses (cutaneous, subcutaneous, or ischiorectal) and (2) supralevator abscesses (submucous, pelvirectal, or retrorectal).

Anorectal abscesses are encapsulated infections and correct treatment demands that the pus be evacuated

surgically, regardless of its depth or location, as soon as it is detected. Those below the levator ani muscle should be decompressed by a wide anteroposterior incision before infection becomes more extensive. The skin edges of the incision should be excised to prevent healing before the abscess cavity has become obliterated.

Many cutaneous abscesses are part of a chronic perianal inflammatory disease, hidradenitis suppurativa. The abscess begins in one of the perianal apocrine glands and burrows into the subcutaneous tissue, producing numerous sinuses. Such a sinus may be confused with an anorectal fistula, but probing will demonstrate that the sinus ends blindly and is in no way connected with the anorectum. Cure is effected by excision of the involved glands, sinuses, and overlying skin.

Abscesses above the levator ani muscle are somewhat more difficult to treat. Those in the pelvirectal space should not be incised through the rectal wall, for such an incision will create an internal type of fistula extremely difficult to treat. Decompression is best secured by making a generous incision just outside the fibers of the sphincter, and plunging a blunt hemostat through the ischiorectal space, through the levator ani muscle into the abscess cavity. A fistula much more amenable to treatment will thus be produced.

The submucous type of abscess, bulging into the lumen of the rectum, may be incised and evacuated inside the bowel.

Retrorectal abscesses are in a space posterior to the rectum and in front of the sacrum, bounded above by the peritoneal reflection and below by the levator ani muscles. On each side are the lateral ligaments of the rectum. As in the case of the pelvirectal abscess, retrorectal abscesses should not be drained through the rectal wall but through an incision made just behind and lateral to the posterior commissure of the anus.

In the treatment of anorectal abscesses, aerobic and anaerobic cultures of the material secured in decompression are made, and penicillin parenterally and Aureomycin by mouth are administered empirically until the temperature of the patient remains at a satisfactory level. When the offending organisms are reported, type-specific antibiotic therapy is instituted. Without delay these patients should be examined for diabetes and kidney disease; these conditions uncontrolled are frequently manifested by pyogenic infections in the anorectal area. It is also important to remember that approximately 4 per cent of anorectal infections are secondary to tuberculosis elsewhere.

A fistulous tract remains after shrinkage of the abscess cavity, which occurs either after spontaneous rupture internally or externally or after evacuation of the contents of the cavity by operation.

Surgery for fistula can be difficult and deceiving, sometimes calling for extremes in resourcefulness and improvision. No one pattern of surgery will serve in all cases but certain principles must govern the procedure. It is usually necessary to divide only the subcutaneous portion of the external sphincter muscle; rarely will the fistulous tract extend above the internal sphincter so that this muscle must be disturbed. When division of muscle becomes necessary, the incision should be at right angles to the muscle fibers so as to produce as little deformity as possible.

Great care should be taken in cutting across the posterior attachment of the muscles surrounding the anus. If the wound is extensive and the fistulous tract extends under this portion of the muscle, a steel alloy wire is threaded through the underlying tract

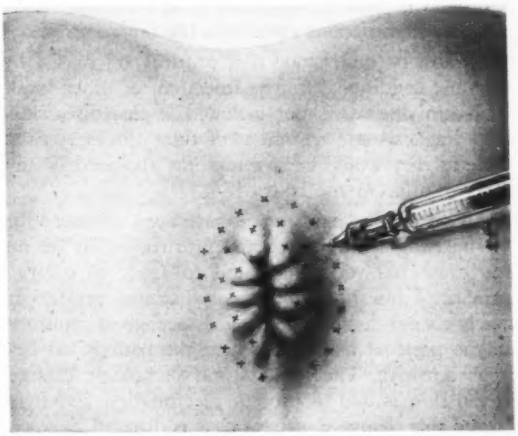

FIG. 3. Diagram demonstrating the subcutaneous injection of alcohol for pruritus.

and the cutting of the muscle delayed until later when the remainder of the wound has healed. This technique prevents anterior displacement of the anus.

The practice of packing and repacking a fistula wound invariably leads to some degree of leakage or incontinence, for the edges of the sphincter muscle are kept apart and a large irregular block of scar tissue is formed between the ends of the muscle which seriously impairs its function. If the skin is trimmed back from the edges of the wound, it will remain open and bridging of its margins by granulation tissue will be prevented. If the fistula is to be cured, it must be incised from its primary opening in the anal canal as far as the normal tissue beyond the secondary opening in the perianal skin; all of the secondary tracts should be incised likewise. In the case of the small fistulous tracts, the indurated tissue is dissected from the walls of the tract until normal tissue is reached. In large fistulous tracts, a bone curette is used to remove the infected granulation and fibrous tissue from the walls of the wound. Thus,

granulation is allowed to proceed from the bottom of the wound upward.

ANAL PRURITUS

Anal pruritus is a chronic neuroepithelial disease, a dermatitis and a neuritis of the perianal and anal skin and sensory nerves, produced by a reaction of the tissues to an irritating moisture to which the patient becomes locally allergic; it is characterized by continual itching, skin changes, and interrelated emotional reaction. The skin changes and the symptoms are definitely correlated; both are progressive. Anal pruritis also may be divided into three stages: (1) simple transitory, (2) chronic, and (3) pernicious. The emotional factors present are usually a lowered threshold of stimulation, anxiety, and conflict. Likewise, racial variations enter into the causation.

It must be understood that pruritus ani caused by systemic conditions, fungus infection, or other localized skin diseases is not included in this discussion. The diagnosis and treatment of these diseases is the same as they would be if symptoms appeared in any other location of the body.

All manners of explanation have been advanced for the puzzling syndrome of anal pruritis, but as yet no one cause has yet been found to apply to a large number of cases. My opinion is that anal pruritus is nearly always due to a continued seepage of moisture on the perianal tissues to which the patient has become sensitive. The fundamental pathologic change in the skin is due to protein precipitation and it is toward this change that treatment is directed.

In simple transitory pruritus, the first stage, there is mild itching, worse at night, but very little change in the gross appearance of the perianal skin. There may be slight redness and swelling with occasional vesicle formation, and frequently no change in the skin is obvious. Treatment at this stage is aimed at maintaining a clean, dry, smooth perianal skin. The patient is instructed to avoid strong alkaline soap and to cleanse and dry the area carefully after each bowel movement with warm water and a soft piece of cotton. Zinc sterate powder dusted on the area will help keep it dry, and Protegel cream, a mixture of aluminum hydroxide and koalin, is effective in protecting the area against moisture and relieving the symptoms of pruritus. Any existing anorectal disease should be removed surgically. Consultation with the allergist is of great value.

In chronic pruritus, the second stage, the itching has become more severe and frequent. It occurs after each bowel movement and is worse at night. In addition, there is a moist stinging sensation in the area. The skin has become thick and moist and there are frequent abrasions near the anal verge.

Treatment at first, consists of applying a protective coating to the skin. A surface antiseptic such as 2 per cent Pontocaine is applied, then the skin is coated with the dye from an indelible pencil. After this dries, a coating of compound tincture of benzoin is applied and allowed to dry. Conservative measures should be given a three or four week trial and if at that time, relief is not satisfactory, it will be necessary to resort to alcohol injection.

Subcutaneous perianal injection of 95 per cent alcohol according to the technique of Harvey Stone (fig. 3) gives the most immediate and satisfactory relief. With a tuberculin syringe 2 minims of 95 per cent alcohol is injected subcutaneously every one-quarter inch over the entire pruritic area of the perianal skin from the anorectal line outward; usually about 7 cc. of alcohol is required for injecting the entire area. This procedure should be done in the hospital with the area anesthetized. Sloughing in certain areas often follows and these areas must be given careful attention. Relief is almost immediate and if small areas are missed, they may be injected in the office under the influence of the anesthesia produced by the alcohol.

Our experience with adenosine-5-monophosphate has been somewhat disappointing but on the other hand, in some instances relief was quite dramatic. The drug is injected intramuscularly every day for three days and thereafter twice weekly until the symptoms have subsided. Several of our patients were completely relieved of their symptoms after a course of treatment with this drug.

The most promising of local measures is a mixture of amino acids made into a paste. Practically all of my patients so treated have had a great measure of relief.

Pernicious anal pruritus, the third stage, sometimes presents a confusing picture. Usually by this time the patient has been subjected to every imaginable treatment and has reached a state of mind in which relief of symptoms is urgent. When relief has been secured, etiologic factors may be considered at leisure. The gross appearance may be more that of a dermatitis due to the local application of irritating drugs or radiotherapy rather than anal pruritus. However, the skin usually shows extensive lichenification with linear ulcers and excoriations. The tissues are macerated and edematous, and frequently there is some secondary infection.

Injection of 40 per cent alcohol according to the technique of Buie will give lasting relief of symptoms at this stage. The alcohol is injected subcutaneously through a 22 needle which has been inserted posteriorly under the skin and passed as far anteriorly as possible, first on one side of the anus and then on the other. At least 20 cc. but not more than 30 cc.

should be used. Extensive sloughing and abscess formation sometimes follow.

An undercutting operation designed by Curtice Rosser gives satisfactory results in this stage of anal pruritus. The operation consists in making radial incisions outward from the anal canal and undercutting the skin between. Oxycel gauze is packed under the skin around the anus. This packing keeps the skin separated from the subcutaneous tissue and prevents early regeneration of cutaneous nerves. The gauze is gradually discharged and absorbed from the wound in from about seven to nine days.

It should be noted that wound infection is still the greatest problem in anorectal surgery. Until such time as an inexpensive and convenient method to sterilize the bowel contents is devised, the problem will continue unchallenged.

SUMMARY

Anorectal diseases are now known to pass through distinct stages of development before reaching pathologic maturity. The appropriate treatment of one stage is not necessarily the treatment of another. The stages of development of anal fissure, hemorrhoids, anorectal infections, and anal pruritus are outlined and the most recent advances in the treatment of each are given.

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ABSTRACT OF DISCUSSION

DR. C. P. HARDWICKE, Austin: Dr. McGivney contributes to the proper therapeutic approach to common anorectal diseases in considering them as progressive rather than static lesions. For example, many cases of early hemorrhoids at least can be controlled by injection therapy, whereas third degree hemorrhoids respond poorly to this form of therapy and practically always require surgical correction. A proper understanding of the indications and limitations of conservative therapy is obviously valuable to the proper practice of medicine in any field and peculiarly so in the care of the disease entities Dr. McGivney has discussed.

It is my belief that conservative treatment in the earlier stages of fissures, hemorrhoids, and anorectal infections in the great majority of patients will afford symptomatic relief. However, I also believe that this relief is permanent only in a small minority of patients and that recurrence and perhaps progression of the disease is the rule, as the underlying cause is still present, be it enlarged anal, perianal, or rectal varicosities; patent anal crypts; or a tight anal canal. The probability of recurrence, however, is not sufficient indication for surgical correction because many patients will get along reasonably well for years and maybe all their lives with occasional flare-ups which respond well in a short time, to conservative treatment. In my opinion, a definite criterion for surgical correction of hemorrhoids, fissures, or anal pruritis is that the patient must have, or must have had, sufficient discomfort from his disease to justify in his mind the pain, loss of time, and expense of surgery. If he has this attitude, results are better for patient and surgeon alike.

A proper understanding of treatment, based on the stage of progress of the anorectal disease, is as valuable as it is in pulmonary tuberculosis, for example, and just as variable.

The inveterate prejudices and antiquated ideas associated with the diagnosis and treatment of rectal diseases remain a challenge to the medical profession. The lack of public knowledge and education regarding these diseases is largely responsible. Accordingly, many patients seek refuge in the glowing descriptions of the various painless cures advertised in various circulars and newspapers. Too often they fall into the hands of charlatans whose business methods exceed their skill in the treatment of rectal diseases. Many difficulties arise from false ideas based on the belief that all rectal disease treated by the medical profession requires surgery.

The remedy will come only with proper alteration of the attitudes of the public and the medical profession. Some members of the medical profession are willing and anxious to emancipate the present-day teachings and practices in proctology from unfortunate prejudices and obsolete notions. Many general practitioners are anxious to learn more about proctology, and it is necessary that those who are in charge of hospitals and teaching institutions give them the opportunity to advance their knowledge in this field.

EXCESSIVE ASPIRIN AFFECTS BLOOD

Reported in the September 8 *Journal of the American Medical Association* is the case of a 74 year old man who experienced eight years of continuous intestinal bleeding as the result of prolonged use of aspirin.

Drs. Walter Modell and Russel Patterson of the Department of Pharmacology and Surgery, Cornell University Medical College, New York, state that serious toxic reactions to the salicylates are rare in relation to the widespread use of this group of drugs. In the case they reported the patient suffered from weakness, anemia, and a decrease in the number of colorless blood corpuscles believed to aid in the clotting of the blood. The symptoms disappeared with discontinuance of the use of aspirin.

Cancer Terminology Clarified

A major attempt to clarify and standardize the complicated terminology of cancer has been made with the publication of a new book, "Manual of Tumor Nomenclature and Coding," by the American Cancer Society. The manual will be distributed widely with the hope that it will be used in conjunction with other standard manuals of nomenclature to permit more exact and complete statistical records.

Essayists on Thyroid Gland Offered Awards

The American Goiter Association again announces the Van Meter prize award of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland.

Competing essays may cover either clinical or research investigations. Manuscripts should not exceed 3,000 words and must be in English; a typewritten copy double spaced in duplicate must be sent to the Corresponding Secretary, Dr. George C. Shivers, 100 East St. Vrain St., Colorado Springs, by March 1.

A place will be reserved on the program of the annual meeting May 1-3, 1952, in St. Louis, for presentation of the prize award essay by the author, if it is possible for him to attend, and the essay will be published in the annual proceedings of the association.

CASE REPORTS

INTERSIGMOID HERNIA

Review of the Literature and Report of an Additional Case

B. F. HARRISON, JR., M.D., and J. H. CHEEK, M.D.,
Dallas, Texas

THE interest in the intersigmoid variety of retroperitoneal hernias seems best accounted for on the basis of its rarity. In the literature are found only occasional case reports and reviews. Most of the articles deal with retroperitoneal hernias in general or with some other type which occurs more frequently. Because of the surgical curiosity of intersigmoid hernias and because there has been no recent collective presentation, we feel justified in reporting an additional case with a review of the cases previously reported.

ANATOMY AND ETIOLOGY

The anatomy and etiology of the intersigmoid fossa should be briefly reviewed.[8, 11, 12]

The fossa is located by turning the sigmoid colon upward and to the right exposing the attachment of the mesocolon to the posterior abdominal wall. The fossa is a funnel shaped pocket or pouch with its orifice looking inferiorly and to the left. It varies in size from a mere dimple in the peritoneum to a definite sac which will admit the tip of the finger. It lies on the left external iliac artery in the space between the psoas and iliacus muscles. It is behind the sigmoid mesocolon and in front of the parietal peritoneum, and behind it is found the left ureter. In some cases the fossa may be observed between the layers of the mesosigmoid, when it lies nearer the bowel than the attachment of the mesentery to the posterior wall. It is a distinct and fairly constant structure, occurring in from 50 to 75 per cent of all bodies.

It is generally accepted that certain peritoneal folds and fossae are produced during embryonic development. In the early months of fetal development the distal half of the colon lies in a midline position and possesses a long mesentery; however, the pressure of the developing small intestine soon pushes the colon with its mesentery over to the left, and a process of fusion occurs between the left layer of the mesocolon and the posterior parietal peritoneum. This process is prevented from passing farther down than the sigmoid colon by the pelvic cavity; thus the sigmoid colon retains its mesentery. Frequently in the region of the left paracolic gutter this adhesion is deficient and a recess results with its opening at the apex of the pelvic mesocolon. In some instances this tubular recess gradually disappears and becomes completely obliterated when adult life is reached; however, in a majority the fusion is never completed at the lower part of the recess and the intersigmoid fossa remains.

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CLINICAL SIGNIFICANCE

From a clinical viewpoint the intersigmoid fossa is important as a possible site for retroperitoneal herniation of a loop of small intestine or a knuckle of large bowel. Intra-abdominal hernias are comparatively rare although many will exist without producing symptoms sufficient to warrant surgery. Herniation of a loop of bowel into one of the retroperitoneal fossae will account for the majority of these internal hernias, and of these the intersigmoid variety is the rarest, accounting for only 3 to 5 per cent of the cases.

Various views have been presented to account for herniation into the intersigmoid fossa.[11, 12] These include a lengthening of the mesentery of the small intestine resulting from an inguinal hernia; imprisoning of the small intestine in the pelvis by adhesions; fixation of the sigmoid colon by adhesions with the sigmoid drawn upward and the fossa exposed; and an abnormal position of the fossa alongside the sigmoid in a more exposed position. It also has been pointed out that in the abdomen there is no differential pressure to aid in the production of the internal hernia as there is in hernias through ordinary sites;[21] however, if a small knuckle of bowel could be caught in a fossa, peristalsis could act much in the same manner as pressure and accomplish the same result. One case of intersigmoid hernia has been explained by this concept.[2]

Symptoms related to these hernias are variable. They may be slight or vague, and it is only when they become more acute that they become surgically important. There may be a history of recurrent bouts of chronic or subacute obstruction, but most will pre-

sent symptoms of acute intestinal obstruction without history of previous attacks. There is the history of sudden, severe, intermittent or colicky pain, generalized over the entire abdomen or more localized about the umbilicus. The pain is usually followed by vomiting and then constipation. The onset may be associated with some activity at the time such as straining, riding, or a fall. There may be a relief of the symptoms by changing position or sitting up, as in the case reported here.

The preoperative diagnosis is rarely made, probably because retroperitoneal hernias in general seldom produce symptoms requiring surgery. The recognition of the obstruction and its correction is the important problem although there are certain features which may be suggestive of intersigmoid hernias. A history of recurrent attacks of pain, vomiting, slight distention, and constipation of short duration may be of aid. Relief of symptoms by changing position or sitting up, as pointed out, is significant. This relief of pain, we believe, is due to relaxation of the tension on the mesentery of herniated loop of bowel. This type of relief was a helpful sign in a case of traumatic herniation of a loop of bowel through the diaphragm. In that case the patient was comfortable only sitting in a slumped position, allowing relaxation of the tension on the mesentery.

Certain physical findings, if present, will be helpful. These include abdominal distention with tenderness, visible peristalsis, and a palpable mass. The tenderness may be localized and be confused with sigmoid diverticulitis or acute appendicitis on the left. If a mass is present, it should be limited to a definite area though the size and tension may vary with the symptoms. It may be soft, elastic, or balloon-like in character but will be resonant on percussion. Various roentgen-ray studies, including a routine flat plate and barium enema, are of importance and should be utilized. Although usually considered as contraindicated, barium by mouth has been recommended.[4, 10, 16] It is of interest that one of the recent cases of intersigmoid hernia was diagnosed preoperatively by roentgen-ray examination.[10]

CASES IN LITERATURE

Following are the cases of intersigmoid hernias that have been reported or reviewed in the available literature to date, the latest being that of Rocha and Martins in 1947.

1. Eve[7] (1885) reported a case of acute obstruction in which at autopsy the sigmoid colon was found drawn up by a band adhesion uniting it to the cecum, thus exposing the fossa and allowing herniation.

2. Eccle[2] (1895) at operation for acute intestinal obstruction found a 4 inch loop of strangulated small intestine passing under the margin of the intersigmoid fossa. The patient died.

3. Lambert[9] (1897) reported a case with a history of subacute obstruction following straining at stool. The patient was operated upon and a loop of intestine was withdrawn from the intersigmoid fossa. The patient died after enterostomy.

4. Coley[5] (1909) reported on an infant 3 days old with acute obstruction who died with operation. At autopsy almost all the small intestine was found to be in a hernial sac beneath the sigmoid colon.

5. Krall's[8] patient (1910) with subacute obstruction was operated upon and the rectum observed to be twisted 180 degrees and the lower sigmoid colon drawn into the sigmoid fossa. The patient recovered.

6. Machol[2] (1911) reported a 60 year old man with acute obstruction who was operated upon. A loop of intestine was found strangulated in a subperitoneal pocket beneath the sigmoid colon. The patient recovered.

7. Murphy's[16] patient (1914) with acute obstruction was operated upon and a loop of intestine found strangulated in the intersigmoid fossa. The patient recovered.

8. Nuzum[17] (1914) reported finding at autopsy the entire small bowel in the intersigmoid fossa although there had been no previous history of symptoms.

9. Marnoch's[15] case (1914) was of a patient with acute obstruction. At operation a 5 inch loop of ileum was delivered from the intersigmoid fossa. The patient died.

10. Black[1] (1915) reported a case in which a tentative diagnosis of intersigmoid hernia had been made; symptoms of chronic obstruction followed a fall. At exploratory laparotomy a loop of bowel was found herniated into the intersigmoid fossa. The patient recovered.

11. Taylor's[20] patient (1918) showed symptoms of subacute obstruction. At surgery a knuckle of bowel wall was found ensnared in the fossa (Richter's hernia). The patient recovered.

12. Carling and Jones[3] (1923) reported a patient with symptoms of acute obstruction who was operated upon. A herniated loop of bowel into the fossa was reduced. The patient recovered.

13. Erke[21] (1923) reported from Leipzig a patient with acute obstruction of twenty-four hours' duration who was operated upon. A loop of bowel was removed from the fossa, and the patient recovered.

14. Smital's case (1923), quoted by Hamilton,[11] involved a patient with acute obstruction who died following surgery.

15. Bruce and Ross[3] (1925) reported a patient operated upon for acute obstruction in whom strangulated bowel was found. The patient died, and at autopsy 60 inches of small bowel were observed in the intersigmoid fossa.

16. Hamilton's[11] patient (1926) had symptoms of acute obstruction for forty-eight hours with a history of previous subacute attacks. He was operated upon and 12 inches of small bowel were removed from the fossa. The patient died nineteen days later from rupture of a thoracic aneurysm.

17. McCarthy[14, 15] (1926) reported a case of acute obstruction in a patient operated upon seventeen hours after onset of symptoms. Gangrenous bowel was found herniated through a defect in the mesosigmoid. The patient died.

18. Kostic's[21] patient (1927) with acute obstruction was operated upon and a loop of bowel withdrawn from the intersigmoid fossa. The patient recovered.

19. Belitzky's[12] patient (1928) with acute obstruction was operated upon and a small bowel herniation reduced from the intersigmoid fossa. The patient died.

20. Gibby's[9] case (1928) concerned a patient with a history of a mass in the left side for two years with abdominal pain for two weeks. Obstruction was diagnosed by roentgen ray. At surgery reduction of herniated bowel into the fossa was carried out. The patient recovered.

21. Hunter[12] (1933) reported a patient with acute obstruction. The condition was diagnosed as adynomic ileus probably due to mesenteric thrombosis. No surgery was done. At autopsy 6 cm. of ileum were found in the intersigmoid fossa.

22. Reid's[18] case (1933) was of a patient with a history of subacute obstruction developing into acute. At operation an obstruction was found and anastomosis about it was done. The patient died thirty-four hours later and at autopsy 5 inches of jejunum were discovered in the fossa.

23. Vickers and Fortuine's[21] patient (1933) had subacute obstruction which became acute. At operation a small knuckle of bowel was found caught in the intersigmoid fossa. The patient recovered.

24. Wilson's[22] case (1944) reported a history of recurrent attacks of vague abdominal pain with vomiting for three or more years becoming acute. Diagnosis of intersigmoid hernia was made by roentgen ray. At surgery a loop of ileum was found in the fossa and reduced. The patient was given saline solution intravenously until death on the next day.

25. Rocha and Martins'[19] patient (1947) with acute obstruction was operated upon and an extensive herniation of ileum into the intersigmoid fossa reduced. Resection was indicated but not feasible. The patient died.

In the 25 cases of intersigmoid hernia collected from the literature 4 either have been questioned or not accepted in previous reviews.[2, 12] In some instances it appears as if lack of acceptance is justified; however, for completeness all cases reported have been included.

Acute obstruction was present in 20 of the 25 cases, 5 being preceded by symptoms of chronic or subacute obstruction over varying periods. Four patients were operated upon because of symptoms of subacute or chronic obstruction. Three of the 25 cases did not include surgery, the reports coming from autopsy findings; 1 of these patients had had no previous symptoms referable to the condition. Twenty-two patients were operated upon and of this number 11 recovered, 1 dying nineteen days later from an unrelated cause. The cases of Black[1] and Wilson[22] were the only ones suggested or diagnosed preoperatively.

CASE REPORT

L. A., a 28 year old white man, was admitted to the hospital three hours after the onset of sudden, severe, intermittent or cramping abdominal pain located to the left and below the umbilicus. The pain did not radiate but was severe enough to cause the patient to "double up." He had ridden a bus all night and two hours before the onset of pain had eaten a barbecue sandwich, soon after which he had become nauseated and vomited. In the hour before admission he had vomited several times. He complained of tenderness in the abdomen at the site of the pain. He was given an enema with poor results and no gas was expelled. This did not relieve his pain although the vomiting stopped. He gave a history of no bowel movement for five days and past history of constipation for four years. He had been told that he had a peptic ulcer when there had been nausea and vomiting on one previous occasion. For the past year so-called indigestion had been troublesome.

Physical Examination.—The abdomen was flat and soft with no masses or rigidity present. The liver, kidneys, and spleen were not palpable. There was deep tenderness 5 cm. below and to the left of the umbilicus. A rectal examination was negative, and no fecal material could be felt. On first examination the abdomen was silent, but ten hours later normal peristaltic sounds were thought to be audible. It was noted that after each examination of the abdomen the patient would sit up, stating that this relieved his pain to a great extent.

Laboratory Findings.—A determination of blood amylase revealed 64 mg. per 100 cc. of serum. A urinalysis was negative. Blood studies showed 4,180,000 red blood cells and 20,500 white blood cells per cubic millimeter, with 76 per cent segment nuclears, 8 per cent band forms, 15 per cent lymphocytes, and 1 per cent monocytes.

Diagnosis.—A preoperative diagnosis of acute appendicitis associated with a mobile cecum allowing a midline position of the appendix or an acute Meckel's diverticulitis was made.

Operation.—Under spinal anesthesia the patient was operated upon (by B.F.H.) twelve hours after admission. Through a McBurney's incision of good size, the appendix was found to be normal. The terminal ileum was searched for a Meckel's diverticulum and none was found. Exploration was then made in the area of tenderness and there was palpated a soft tumor about 8 cm. in diameter lying near the promontory of the sacrum. A Weir's extension of the incision was done and it was discovered that the sigmoid colon was displaced medially. By turning the sigmoid and its mesentery to the right there was visualized a limb of small bowel entering and leaving a constricted ring at the root of the mesentery. Gentle traction was made and light pressure on the mass expressed the loop of small intestine, measuring 12 to 14 cm. in length. There was no evident distention above or collapse of small bowel below the obstruction, but the bowel involved had a marked color change to dark bluish-red.

After the use of warm saline packs on this area the bowel appeared to be viable and it was returned to the abdomen. There were no adhesions about the opening of the intersigmoid fossa into which the bowel had herniated, and the peritoneal lining was redundant. No plastic repair of the opening was attempted because of the inadequacy of the exposure and the patient's poor condition. The incision was closed with interrupted cotton sutures, and the patient made an uneventful recovery.

COMMENTS

The case of intersigmoid hernia reported brings the total in accessible literature to 26, of which 4 may not have been true fossa hernias. The preoperative diagnosis of a hernia of this variety is unimportant and only of academic interest, although the same cannot be said of the recognition of the presence of an acute condition in the abdomen requiring surgery. However, certain findings should cause the physician to consider these hernias in the differential diagnosis of the cause of acute and subacute intestinal obstruction. Of importance is the sign of mesenteric tension in which the pain is increased in recumbent position and in which it is relieved, as the tension is relaxed, in the sitting or flexed position.

The high mortality rate in these cases may be due to delay of surgery until necrosis of the loop of bowel

has occurred. The delay probably results from a lack of anterior peritoneal irritation and therefore lack of marked tenderness or rigidity. The reduction of a loop of bowel from the retroperitoneal space following necrosis would be accompanied in many instances by marked peritoneal soiling.

In the case presented the outstanding symptoms and signs which seemed to indicate surgery were (1) localized tenderness in the presence of acute symptoms and an elevated white blood cell count, (2) absence of anterior peritoneal irritation and therefore only deep tenderness and no rigidity, and (3) alteration of the degree of pain when the patient changed position so as to relax the tension on the mesentery of the herniated loop.

SUMMARY

A review of intersigmoid hernia is presented. The cases which have appeared in the available literature are collected. An additional case is reported with the symptoms and signs which indicated surgery, the most significant being that of mesenteric tension.

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NEWS

COMING MEETINGS AND CLINICS

Texas Medical Association, Dallas, May 4-7, 1952. Dr. Allen T. Stewart, Lubbock, Pres.; N. C. Forrester, 700 Guadalupe St., Austin, Acting Executive Secy.

American Medical Association, Los Angeles, Dec. 4-7, 1951. Dr. John W. Cline, San Francisco, Calif., Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy. Dr. Walter S. Burrage, Milwaukee, Pres.; Mr. James O. Kelley, 208 E. Wisconsin Ave., Milwaukee 2, Executive Secy.

American Academy of Dermatology and Syphilology, Chicago, Dec. 8-13, 1951. Dr. Donald M. Pillsbury, Philadelphia, Pres.; Dr. John E. Rauschkolb, 25 Prospect Ave., N. W., Cleveland 15, Secy.

American Academy of General Practice, Atlantic City, March 24-27, 1952. Dr. Jason P. Sanders, Shreveport, La., Pres.; Mr. Mac F. Cahal, 406 W. 34th St., Kansas City 2, Executive Secy.

American Academy of Neurological Surgery, Oct. 4-6, Houston. Dr. William S. Keith, Toronto, Canada, Pres.; Dr. T. C. Erickson, 1300 University Ave., Madison 5, Wis., Secy.

American Academy of Obstetrics and Gynecology, Business Meeting, Cincinnati, March 31-April 4, 1952. Dr. Woodard D. Beacham, New Orleans, Pres.; Dr. Ralph A. Reis, 116 S. Michigan Ave., Chicago 3, Secy.

American Academy of Ophthalmology and Otolaryngology. Dr. Derrick Vail, Chicago, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics. Dr. Paul W. Beaven, Rochester, N. Y., Pres.; Dr. E. H. Christopherson, 636 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery, Dallas, May 8-10, 1952. Dr. Frank B. Berry, New York, Pres.; Dr. Paul C. Samson, 2938 McClure St., Oakland 9, Calif., Secy.

American Association of Genito-Urinary Surgeons. Dr. Charles C. Higgins, Cleveland, Pres.; Dr. Norris J. Heckel, 122 S. Michigan Ave., Chicago 3, Secy.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons. Dr. James K. Quigley, Rochester, N. Y., Pres.; Dr. William F. Mengert, 2211 Oak Lawn Ave., Dallas, Secy.

American Cancer Society. Dr. Guy Aud, Louisville, Ky., Pres.; Mr. M. R. Runyon, 47 Beaver St., New York, Exec. Vice-Pres.

American College of Allergists. Dr. John H. Mitchell, Columbus, Ohio, Pres.; Dr. Fred W. Wittich, 423 La Salle Medical Building, Minneapolis 2, Secy.

American College of Chest Physicians, Chicago, June 5-8, 1952. Dr. Chevalier L. Jackson, Philadelphia, Pres.; Mr. Murray Kornfeld, 112 E. Chestnut St., Chicago 11, Exec. Secy.

American College of Physicians, Cleveland, April 21-25, 1952; regional meeting, New Orleans, Feb. 15-16, 1952. Dr. Maurice C. Pincoffs, Baltimore, Pres.; Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology, Chicago, June 8, 1952. Dr. Robert R. Newell, San Francisco, Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American College of Surgeons, San Francisco, Nov. 5-9, 1951. Dr. Henry W. Cave, New York, Pres.; Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secy.

American Congress of Physical Medicine. Dr. Robert L. Bennett, Warm Springs, Ga., Pres.; Dr. Walter J. Zeiter, 2020 E. 93rd, Cleveland 6, Executive Director.

American Dermatological Association, Colorado Springs, April 23-26, 1952. Dr. Edward A. Oliver, Chicago, Pres.; Dr. L. A. Brunsting, 102 2nd Ave., S. W., Rochester, Minn., Secy.

American Gastro-Enterological Association. Dr. T. Grier Miller, Philadelphia, Pres.; Dr. Dwight L. Wilbur, 655 Sutter St., San Francisco, Secy.

American Gynecological Society, Hot Springs, Va., May 12-14, 1952. Dr. Walter T. Dannreuther, New York, Pres.; Dr. John I. Brewer, 104 S. Michigan Ave., Chicago, Secy.

American Hospital Association, Philadelphia, 1952. Dr. Anthony J. J. Rourke, San Francisco, Pres.; Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secy.

American Laryngological, Rhinological, and Otological Society, Toronto, May 20-22, 1952. Dr. C. S. Nash, 277 Alexander St., Rochester 7, N. Y., Pres. and Secy.

American Neurological Association. Dr. S. Bernard Wortis, New York, Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society, Hot Springs, Va., June 5-7, 1952. Dr. Lawrence T. Post, St. Louis, Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York 19, Secy.

American Orthopedic Association, London, June 30-July 4, 1952. Dr. Fremont Chandler, Chicago, Pres.; Dr. C. Leslie Mitchell, Henry Ford Hospital, Detroit 2, Secy.

American Pediatric Society. Dr. Hugh McCulloch, Chicago, Pres.; Dr. Aims McGuinness, 1740 Bainbridge St., Philadelphia 46, Secy.

American Proctologic Society, Milwaukee, June 4-7, 1952. Dr. R. A. Scarborough, San Francisco, Pres.; Dr. Stuart T. Ross, 131 Fulton Ave., Hempstead, N. Y., Secy.

American Psychiatric Association, Atlantic City, May 12-16, 1952. Dr. Leo H. Bartemeier, Detroit, Pres.; Dr. R. Finley Gayle, 6300 Three Chopt Rd., Richmond 21, Va., Secy.

American Public Health Association, San Francisco, Oct. 29-Nov. 2, 1951. Dr. W. P. Shepard, San Francisco, Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Secy.

American Society of Anesthesiologists, Washington, D. C., Nov. 5-8, 1951. Dr. Urban H. Eversole, Boston, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists. Dr. F. William Sundermann, Atlanta, Ga., Pres.; Dr. Clyde G. Culbertson, Indiana University School of Medicine, Indianapolis, Secy.

American Surgical Association, White Sulphur Springs, April 16-18, 1952. Dr. Daniel C. Elkin, Atlanta, Pres.; Dr. Nathan Womack, University of Iowa, Iowa City, Secy.

American Urological Association, Atlantic City, June 23-26, 1952. Dr. Elmer Hess, Erie, Pa., Pres.; Dr. C. H. deT. Shivers, 121 S. Illinois Ave., Atlantic City, N. J., Secy.

Association of American Physicians and Surgeons. Dr. Lawerence Shinabery, Fort Wayne, Ind., Pres.; Mr. Harry E. Northam, 360 N. Michigan Ave., Chicago 1, Executive Secy.

International College of Surgeons, U. S. Chapter, Chicago, Sept. 2-5, 1952. Dr. H. W. Meyerding, Rochester, Minn., Pres.; Dr. Arnold S. Jackson, 1516 Lake Shore Drive, Chicago, Secy.

National Tuberculosis Association, Boston, May 26-30, 1952. Dr. Alton S. Pope, Boston, Pres.; Mr. Kemp D. Battle, 1790 Broadway, New York 19, Secy.

Radiological Society of North America, Chicago, Dec. 3-7, 1951. Dr. John S. Bouslog, Denver, Pres.; Dr. D. S. Childs, Medical Arts Bldg., Syracuse 2, N. Y., Secy.

Southern Medical Association, Dallas, Nov. 5-8, 1951. Dr. Curtice Rosser, Dallas, Pres.; Mr. C. P Loranz, 1020 Empire Bldg., Birmingham, Ala., Secy.

Southern Psychiatric Association. Dr. R. Burke Suitt, Durham, N. C., Pres.; Dr. Newdigate M. Owensby, Medical Arts Bldg., Atlanta, Ga., Secy.

Southern Surgical Association, Hot Springs, Va., Dec. 4-6, 1951. Dr. Frank C. Wilson, Birmingham, Ala., Pres.; Dr. John C. Burch, 2112 West End Ave., Nashville, Tenn., Secy.

Southwest Allergy Forum, Dallas, March, 1952. Dr. C. B. Shuey, Dallas, Pres.; Dr. James Holman, Medical Arts Bldg., Dallas, Secy.

Southwest Regional Cancer Conference. Secy., 209 Medical Arts Bldg., Fort Worth.

Southwestern Medical Association, Albuquerque, N. Mex., 1952. Dr. James Walsh, Douglas, Ariz., Pres.; Dr. W. W. Schuessler, 1415 First National Bank Bldg., El Paso, Secy.

Southwestern Surgical Congress. Dr. Leo J. Starry, Oklahoma City, Pres.; Dr. C. R. Rountree, 1227 Classen, Oklahoma City 3, Secy.

Tri-State Medical Assembly. Dr. W. S. Terry, Jefferson, Pres.; Dr. James Harris, Marshall, Secy.

United States-Mexico Border Public Health Association, Monterrey, March 17-19, 1952. Dr. Wilton L. Halverson, San Francisco, Pres.; Dr. J. Ellington, 314 U. S. Court House, El Paso, Secy.

STATE

Texas Academy of General Practice, San Antonio, Sept. 14-15, 1952. Dr. Van D. Goodall, Clifton, Pres.; Dr. B. H. Bayer, 104 E. Twentieth St., Houston, Secy.

Texas Academy of Internal Medicine, Galveston, Dec. 8-9, 1951. Dr. W. L. Marr. Galveston, Pres.; Dr. John S. Chapman, 3810 Swiss Ave., Dallas, Secy. Meetings restricted to members.

Texas Air-Medics Association. Dr. W. M. Pratt, Houston, Pres.; Dr. J. S. Minnett, 2512 Welborn, Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Austin, Feb. 8-9, 1952. Dr. S. Foster Moore, San Antonio, Pres.; Dr. Carey Hiett, 603 College Ave., Fort Worth, Secy.

Texas Chapter, American College of Chest Physicians, Dallas, May 5, 1952. Dr. J. E. Dailey, Houston, Pres.; Dr. Howard Smith, 3215 Exposition Blvd., Austin, Secy.

Texas Club of Internists. Dr. Ghent Graves, Houston, Pres.; Dr. Hatch W. Cummings, Jr., 203 Hermann Professional Bldg., Houston, Secy.

Texas Dermatological Society, Dallas, May 5, 1952. Dr. W. H. Connor, Houston, Pres.; Dr. C. H. McCuistion, Capital National Bank Bldg., Austin, Secy.

Texas Diabetes Association, Dallas, May 4, 1952. Dr. D. W. Carter, Jr., Dallas, Pres.; Dr. Ivan Mayfield, 1312 Main, Lubbock, Secy.

Texas Division, American Cancer Society, Dallas, Nov. 21, 1951. Mr. Frank C. Smith, Houston, Pres.; Mr. J. Louis Neff, 2307 Helena St., Houston 6, Executive Director.

Texas Heart Association, Dallas, May 5, 1952. Dr. Paul V. Ledbetter, Houston, Pres.; Miss Roberta Miller, 411 Reserve Loan Life Bldg., Dallas, Executive Secy.

Texas Hospital Association, Houston, May 20-22, 1952. Mrs. Ruby B. Gilbert, Temple, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association, Dallas, May 5, 1952. Dr. David Wade, Austin, Pres.; Dr. James Blair, 1708 Nix Professional Bldg., San Antonio, Secy.

Texas Orthopedic Association, Dallas, May 5, 1952. Dr. G. W. N. Eggers, Galveston, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, Dallas, Oct. 17-18, 1952. Dr. C. S. E. Touzel, Fort Worth, Pres.; Dr. M. C. Carlisle, 1410 Austin Ave., Waco, Secy.

Texas Public Health Association, Galveston, Feb. 17-20, 1952. Mr. Barnie A. Young, Austin, Pres.; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Executive Secy.

Texas Radiological Society, Houston, Jan. 18-19, 1952. Dr. Curtis H. Burge, Houston, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association, Dallas, May 5, 1952. Dr. A. W. Hartman, San Antonio, Pres.; Dr. W. F. Parsons, First National Bank Bldg., Fort Worth, Secy.

Texas Rheumatism Association, Galveston, January 18, 1952. Dr. G. W. N. Eggers, Galveston, Pres.; Dr. Robert H. Mitchell, 210 Medical Arts Bldg., Fort Worth, Secy.

Texas Society for Mental Health, Fort Worth, March 6-7, 1952. Dr. Warren T. Brown, Houston, Pres.; Mrs. Elizabeth F. Gardner, 2504 Jarratt Ave., Austin 21, Executive Secy.

Texas Society of Anesthesiologists, Dallas, May, 1952. Dr. L. F. Schuhmacher, Jr., Houston, Pres.; Dr. Werner Hoeflich, 2301 Reba, Houston, Secy.

Texas Society of Gastroenterologists and Proctologists, Dallas, May 5, 1952. Dr. Carl G. Giesecke, San Antonio, Pres.; Dr. John S. Bagwell, Medical Arts Bldg., Dallas, Secy.

Texas Society of Ophthalmology and Otolaryngology, Austin, Dec. 7-8, 1951. Dr. Edward D. Dumas, San Antonio, Pres.; Dr. Lyle Hooker, 627 Esperson Bldg., Houston, Secy.

Texas Society of Pathologists, Dallas, Jan. 27, 1952. Dr. Stuart A. Wallace, Houston, Pres.; Dr. A. O. Severance, 205 Camden. San Antonio, Secy.

Texas Surgical Society, Houston, April 7-8, 1952. Dr. Robert M. Moore, Galveston, Pres.; Dr. Albert W. Hartman, 414 Navarro St., San Antonio 5, Secy.

Texas Tuberculosis Association, San Antonio, April 18-19, 1952. Dr. David McCullough, Kerrville, Pres.; Miss Pansy Nichols, 208 E. Ninth, Austin, Executive Secy.

Texas Urological Society, Dallas, Feb. 4, 1952. Dr. William H. Heck, San Antonio, Pres.; Dr. J. D. Mitchell, 1414 Medical Arts Bldg., Dallas, Secy.

DISTRICT

Second District Society, Odessa, March 11, 1952. Dr. A. H. Daniell, Brownfield, Pres.; Dr. C. B. Knox, Jr., Seagraves, Secy.

Third District Society, Plainview, April 8-9, 1952. Dr. Pauline Miller, Lubbock, Pres.; Dr. James T. Hall, 1302 Avenue Q, Lubbock, Secy.

Fourth District Society, Brady, Nov. 14, 1951. Dr. S. Braswell Locker, Brownwood, Pres.; Dr. B. A. Hallum, Brady, Secy.

Fifth and Sixth Districts Society. Dr. G. Turner Moller, Corpus Christi, Pres.; Dr. Y. C. Smith, 1813 S. Alameda Blvd., Corpus Christi, Secy.

Seventh District Society. Dr. George W. Tipton, Austin, Pres.; Dr. D. B. Faubion, 1403 C Guadalupe, Austin, Secy.

Eighth District Medical Society. Dr. Leonard Johnson, El Campo, Pres.; Dr. Robert Casey, Texas City, Secy.

Ninth District Society. Dr. F. Ray Black, Huntsville, Pres.; Dr. Lyman C. Blair, 1212 Rothwell, Houston, Secy.

Tenth District Medical Society, Lufkin, February, 1952. Dr. T. A. Fears, Beaumont, Pres.; Dr. J. M. White, Jr., 3149 Proctor, Port Arthur, Secy.

Eleventh District Society, Athens. Dr. Griff T. Ross, Mount Enterprise, Pres.

Twelfth District Society, Waco, Jan. 8, 1952. Dr. S. C. Richardson, Bryan, Pres.; Dr. J. C. Terrell, Stephenville, Secy.
Thirteenth District Society. Dr. W. B. Adamson, Abilene, Pres.; Dr. Robert D. Moreton, 815 Medical Arts Bldg., Fort Worth, Secy.
Fourteenth District Society, Greenville, June, 1952. Dr. N. L. Barker, Paris, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.
Fifteenth District Society. Dr. C. B. Reed, Clarksville, Pres.; Dr. William E. Jones, 619 Main, Texarkana.

CLINICS

Dallas Southern Clinical Society, Dallas, March 17-20, 1952. Miss Betty Elmer, Medical Arts Bldg., Dallas 1, Executive Secy.
International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, Jan. 22-24, 1952. Dr. John J. Hinchey, P. O. Box 2445, San Antonio, Secy.
New Orleans Graduate Medical Assembly. Dr. Woodard D. Beacham, Room 105, 1430 Tulane Ave., New Orleans 12, Secy.
North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls. Dr. W. L. Powers, Hamilton Bldg., Wichita Falls, Chairman.
Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 29-Nov. 1, 1951. Mrs. Muriel R. Waller, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.
Postgraduate Medical Assembly of South Texas, Houston, July 21-23, 1952. Dr. C. A. Dwyer, Secy., 229 Medical Arts Bldg., Houston.

PEDIATRICS REFRESHER COURSE

A postgraduate conference in pediatrics under the auspices of the University of Texas Child Health Program, in cooperation with the Postgraduate Division of the University of Texas Medical Branch and the Texas Medical Association, will be held at Galveston, November 26-30. Distinguished guest speakers announced for the conference include Drs. Russell J. Blattner, Baylor University College of Medicine, Houston; Charles C. Chapple, University of Pennsylvania, Philadelphia; Gilbert B. Forbes, Southwestern Medical School of the University of Texas, Dallas; and F. Howell Wright, University of Chicago, Chicago.

Registration on the fourth floor of the Clinic Building will take place between 8 and 9 a. m., November 26. Lectures and discussions will begin immediately thereafter. Problems of infancy, respiratory tract problems, psychologic problems, neurologic problems, diagnostic and therapeutic techniques, infectious diseases, dermatologic disorders, special problems involving the school child, contagious diseases, and recent advances in therapy will be considered in the five-day conference.

Participating members of the University of Texas staff will be Drs. Arr Nell Boelsche, James L. Dennis, George Emerson, Joe Engler, Frank Engley, Harriet M. Felton, G. David Ford, Francis A. Garbade, Reagan H. Gibbs, Arild E. Hansen, W. R. Hepner, O. L. Johnson, Fred Kolle, Howard E. LeBus, William C. Levin, Roger I. Lienke, Clarence S. Livingood, C. Cristopher Morris II, Joseph Oshman, Theo C. Panos, Martin Schneider, Mollie M. Stephens, Willie M. Verniaud, and George Willeford, and Miss Janice Pratt. Mr. Herbert Prieser, assistant superintendent of Galveston County Schools, also will contribute to the discussions.

Details of the conference may be obtained from Dr. E. Ivan Bruce, Jr., director of the Postgraduate Division at the Medical Branch.

Cancer Brochures Being Mailed

Monographs on different phases of cancer, prepared by the American Cancer Society as part of its postgraduate education program for practitioners, will be available to Texas physicians if they want them. The first brochure, "Cancer of the Esophagus and of the Stomach" by Dr. Owen H. Wangensteen, has been mailed to each member of the Texas Medical Association, together with a postal card which can be returned with comments to the Texas Division of the American Cancer Society. If the response is favorable, future illustrated papers on cancer of the skin, larynx, pharynx, soft parts, and other subjects will be furnished to Texas physicians.

TEXAS SURGICAL SOCIETY

The Texas Surgical Society, meeting in Fort Worth on October 1 and 2, had 108 members and 64 visitors in attendance. The scientific program outlined below was presented:

OCTOBER 1

Wilms' Tumor—Dr. Mack F. Bowyer, Abilene.
Clinical Consideration of Retroperitoneal Tumors—Dr. J. P. North, McKinney.
Surgical Considerations of Diverticula of Esophagus—Drs. Michael DeBakey, John P. Heaney, and Oscar Creech, Houston.
Pulmonary Decortication with a Seven Year Follow-Up—Dr. Raleigh R. Ross, Austin.
Regeneration of Human Thyroid after So-Called Total Thyroidectomy—Dr. John V. Goode, Dallas.
Droop Shoulder Secondary to Cervical Node Biopsy—Dr. Ralph A. Munslow, San Antonio.
Total Abdominal Hysterectomy—Dr. George E. Pryor, Stamford.
A Few Gynecologic Surprises—Dr. Allen L. McMurrey, Houston.
End Results Following Nephrectomy in Patients with Hypertension—Dr. William F. Braasch, Emeritus Professor of Urology, Mayo Foundation, Rochester, Minn., Guest speaker.
Lumbar Sympathectomy—Dr. William W. McKinney, Fort Worth.
End Result in Lumbodorsal Sympathectomy for Hypertension—Dr. George Waldron, Houston.
Improved Upper Femoral Prosthesis—Dr. Charles F. Clayton, Fort Worth.

OCTOBER 2

Unusual Tumor of Pancreas Surgically Removed—Dr. R. J. White, Fort Worth.
Management of Chronic or Recurrent Obstruction of Small Intestine—Dr. Raleigh R. White, Temple.
Experience in Care of Debilitated Patients with Abdominal Fistulas—Drs. Frank H. Kidd, Jr., and J. Harold Cheek, Dallas.
Carcinoid (Neurocrine) Tumors of Rectum—Dr. Curtice Rosser, Dallas.
Appendicitis as Presenting Symptom of Carcinoma of Cecum—Dr. John F. Thomas, Austin.
Massive Melena—Dr. Robert M. Moore, Galveston.

An executive session, a council meeting, a luncheon, and two evenings' entertainment constituted the balance of the meeting. A cocktail party was given September 30 by the Fort Worth members, and the following evening the president, Dr. Edward White, Dallas, spoke on "Indoor Sport for Young Surgeons" at a banquet preceded by cocktails.

Elected to office for the coming year were the following: Drs. Robert M. Moore, Galveston, president; F. L. Snyder, Fort Worth, first vice-president; Andrew Small, Dallas, second vice-president; and Albert W. Hartman, San Antonio, secretary. The Society will meet next April 7-8, 1952, in Houston.

UNIVERSITY OF TEXAS MEDICAL BRANCH

Dr. Arild E. Hansen, professor of pediatrics at the University of Texas Medical Branch, Galveston, was presented the outstanding achievement award of the University of Minnesota on October 8. The award is reserved for former students of the university who have attained high eminence and distinction. Dr. Hansen received further recognition as guest editor of a rheumatic fever symposium which was the chief feature of the October issue of *Modern Medicine.* Dr. Hansen's picture appeared on the front cover of the periodical.

Charles M. Pomerat, Ph. D., director of the Tissue Culture Laboratory at the Medical Branch, was awarded a $1,000 prize for his contribution to scientific knowledge of cell growth by A. Harris Company of Dallas through the Southwestern Medical Foundation.

Dr. Kenneth Franklin, professor of physiology at the University of London and visiting professor of physiology at the University of Illinois, Urbana, was guest lecturer at the Medical Branch during the week of November 12. Dr. Franklin planned lecture visits at Baylor University College of Medicine, Houston, and Southwestern Medical School, Dallas, after leaving Galveston.

New appointments to the Medical Branch faculty include Dr. Victor C. Calma, assistant professor of physiology; Dr.

Ed Rowe, instructor in surgery; Dr. J. F. Mullins, instructor in dermatology and syphilology; and Edward G. Rennels, Ph. D., assistant professor of anatomy.

Wendell Griffith, Ph. D., professor of biochemistry and nutrition, resigned from the Medical Branch faculty to accept a similar position at the University of California Medical School at Los Angeles.

Texas Division, American Cancer Society

The sixth annual meeting of the Texas Division, American Cancer Society, is being held November 21 in Dallas. The Texas Board of Directors also will meet.

The guest speaker at a luncheon will be Dr. Felix J. Underwood, Jackson, Miss., who will describe the educational and service programs of the Mississippi Division of the American Cancer Society. Dr. Underwood is a member of the national board of directors of the Society, chairman of the executive committee and Board of the Mississippi Division, executive officer of the Mississippi State Board of Health, and associate professor of public health at the University of Mississippi.

Frank C. Smith, Houston; Mrs. Joseph M. Perkins, Eastland; and Dr. G. V. Brindley, Temple, president and vice-presidents respectively of the Texas Division, will stress the interrelationship between the lay men, women, and medical leaders who conduct the cancer control program. This year for the first time the professional and lay groups will meet in one session. During the business meeting officers will be elected and two new committees on lay and professional activities will report.

Austin Physicians Have Classes

Classes in gynecology and in therapy in internal medicine are being held each Monday evening for ten weeks in Austin in a series sponsored jointly by the University of Texas Postgraduate School of Medicine and Main University and the Texas Academy of General Practice, Austin Chapter, reports the Austin *Statesman.* Beginning October 15 and continuing through December 17, the courses are being taught by physicians on the Postgraduate School staff.

Instructors in the Austin gynecology course includes Drs. Felix Rutledge, C. A. Calhoun, Joe P. Salerno, Warren M. Jacobs, Robert Johnston, John Wall, Allen McMurrey, Maurice J. Meynier, and William R. Knight, Houston, and John Hall, Temple.

The faculty of the course in physical medicine includes Drs. Paul Ledbetter, Stephen Foote, William V. Leary, Mavis P. Kelsey, Robert Edwards, Clifton D. Howe, C. C. Shullenberger, and T. R. Jones, Houston; Raymond Gregory, Galveston; and A. Ford Wolf, Temple.

Student Medical Society Progresses

The third and final issue of *News Vox,* the interim bulletin of the Student American Medical Association, has announced the publication of an official journal of the organization to begin with the January, 1952, issue. Meanwhile, scientific articles are being sought, advertising is being sold, and an editorial staff is being organized.

Established last December, the student organization's constitution has been ratified by forty schools, and it is the goal of the already busy executive council to have a 100 per cent membership of the seventy-nine medical schools in the United States by the time the first issue of the journal is distributed.

The annual convention of the Student American Medical Association is set for December 27-28 in Chicago. Inquiries about the meeting, the journal, or other activities of the association may be directed to the executive secretary, Russell F. Staudacher, 535 North Dearborn Street, Chicago 10.

PERSONALS

Dr. H. H. Cooke, Hereford, was a delegate from the American College of Surgeons to the eighth Inter-American Congress of Surgery at Buenos Aires, October 1-6, reports the Hereford *Brand.*

Dr. J. E. Miller, Dallas radiologist, is serving as a guest instructor for a postgraduate course in radiology at the University of Oklahoma School of Medicine, Oklahoma City, November 15-17.

Dr. Cecil O. Patterson, Dallas, was an honor guest at the postgraduate course of the American College of Physicians in New Orleans on November 12 and 13.

Dr. Benjamin M. Avent, Rosebud, graduate of 1897, and *Dr. David B. Currie,* Roma, graduate of 1901, were among the fifty-seven physicians honored September 24 by the University of Tennessee Medical Units at commencement exercises in Memphis. Golden "T" certificates were presented to the physicians in recognition of their service during the half century since they received their medical degrees, inform the Rosebud *News* and Zapata County *News.*

Dr. G. P. Rains, Marshall, a graduate of the University of Texas School of Medicine in 1896, was honored by the Harrison County Medical Society for the completion of fifty years of general practice in Harrison County. A resolution commending his work was adopted by the faculty of the Medical Branch for presentation to him at the anniversary celebration the latter part of September.

Dr. J. G. McCall and *Dr. J. S. Anderson,* both of Brady, were honor guests when graduates of the Brady Hospital School for Nurses held their first homecoming in Brady in August. The physicians established the school in 1917, and about 100 nurses were graduated before the school closed in 1942, according to the Brady *Standard.*

Dr. and Mrs. J. A. Odom, Memphis, celebrated their golden wedding anniversary August 26 with an open house, reports the Childress *Index.*

Dr. and Mrs. August Berchelmann, San Antonio, are parents of a son, William George, born May 10, and *Dr. and Mrs. Albert Rath,* also of San Antonio, are parents of a son, James Robert, born June 20. *Dr. and Mrs. William Johnson,* San Antonio, have announced the birth of a daughter, Nancy, born September 20.

Dr. and Mrs. J. R. Donaldson, Pampa, are parents of a boy born July 15, reports the University of Texas Alumni *Bulletin.*

Dr. and Mrs. S. M. Katz, Dallas, are the parents of a new daughter, states the *Dallas Medical Journal.*

The mother of *Dr. H. S. Aronson,* Dallas physician, died recently, according to the *Dallas Medical Journal.*

Mrs. W. R. Nail, Waco, died August 24, states the McGregor *Mirror.* Mrs. Nail is survived by her husband, *Dr. W. R. Nail,* and four sons, *W. R. Nail, Jr.,* D.D.S., Dallas; *Dr. James B. Nail,* Wichita Falls; *R. S. Nail,* D.D.S., Waco; and Ben Nail, Crawford.

Infertility Award Announced

The American Society for the Study of Sterility will award $1,000 in 1952 for the most outstanding contribution to the subject of infertility and sterility. Essays for the competition must be received not later than March 1. Further details may be obtained from the society, 20 Magnolia Terrace, Springfield, Mass.

Vocational Nurse Examining Board Opens Office

The mailing address of the newly opened office of the Board of Vocational Nurse Examiners is 306 Austin Savings and Loan Association Building, 1010 Lavaca Street, Austin. Mr. E. Maxwell Jones is the office manager.

CURRENT POLICY IN MILITARY AFFAIRS

A meeting of the Texas State Advisory Committee to the National Advisory Committee to the Selective Service System, held in Austin on October 18, clarified many of the questions which have arisen in connection with advisory committee work under the Universal Military Training and Service Act, which includes Public Law 779, Eighty-first Congress. A detailed bulletin of information covering the meeting has been mailed to every member of the Texas Medical Association, Texas State Dental Society, and Lone Star State Medical Association.

Local Advisory Committees

Since the organization of the Texas Advisory Committee, much confusion has existed as to the extent of authority vested with local advisory committees in making recommendation for physicians, dentists, and veterinarians, and this was a main point of discussion at the meeting. The local medical advisory committee is the only group at the local level having *full* federal authority to make these recommendations.

The State Advisory Committee has received excellent cooperation from the local committees in recommendations regarding physicians. There has been some difficulty and misunderstanding in the past, however, regarding recommendations for dentists. When a request for recommendation concerning a dentist is initiated, the local medical committee, in making its recommendation, should consult the local dental advisory committee if such committee has been organized. Recommendation made by the local dental committee should be carefully studied and, whenever possible, supported. Although some medical advisory committees feel they should not presume to make recommendation for dentists, final recommendation at the local level must be made by the local medical committee.

Local advisory committees are of a permanent nature, and membership is not to be changed except in case of death. If a vacancy due to death or an extremely extenuating circumstance occurs, replacement should be selected by the chairman of the committee. This selection first must be submitted to the office of the Executive Secretary, 700 Guadalupe Street, Austin, for official approval by the chairman of the State Advisory Committee, Dr. R. A. Trumbull.

The National Advisory Committee has pointed out that all records emanating from transactions of local advisory committees are government property. Records should be maintained separately from the files of the local county medical societies, and they are subject to government inspection.

When the State Advisory Committee was organized, the president of each county medical society in Texas was requested to appoint physicians to serve on a local advisory committee. These local committees have not been appointed in a few areas. The State Advisory Committee decided to request the councilor of each district wherein local advisory committees have not been appointed to recommend his selection of members in the area to comprise an advisory committee. This request has been made, and if the councilors' selections are approved, letters of appointment will be forwarded to the persons chosen.

Local advisory committees have *full* authority to give advice regarding special registrants (physicians, dentists, and veterinarians) and allied specialists (x-ray equipment technicians, medical and dental technicians, physical therapists, and orthopedic and prosthetic technicians) to local Selective Service boards, unless the person concerned wishes to appeal the recommendation of the local committee to the State Advisory Committee. The policy followed by the office of the Executive Secretary of accepting the local committees' recommendations regarding availability and/or essentiality of physicians and dentists in the Navy and Air Force Reserve whose names are listed by the National Advisory Committee and forwarded to the central office has been fully endorsed.

Selective Service headquarters has advised that recommendations of local advisory committees relative to the essentiality of special registrants and allied specialists will be given strong consideration by local Selective Service boards, but the local boards are not bound by regulation to accept these recommendations. It has been clarified that allied specialists have the same right to appeal their individual cases to the State Advisory Committee as do physicians, dentists, and veterinarians.

Induction and Appeal

Special registrants who are between the ages of 18 and 26 years are also registered by Selective Service as regular registrants, thereby creating a dual responsibility for them. Although local Selective Service boards have authority to call such doctors as regular registrants, Selective Service in this state does not expect the induction of any doctor as a regular registrant; it is much preferred that qualified physicians, dentists, and veterinarians enter the military service in their respective professional capacities. The National Advisory Committee has stated that should there be a case wherein a qualified doctor is subject to induction, that person should apply for a commission. It is an individual's responsibility to know the Selective Service regulations applying to his particular status.

Selective Service regulations regarding appeal procedure are as follows: After a registrant has been classified by his local board and receives his notice of classification, he has ten days in which to request a personal appearance before the local board or to request appeal. In the former instance, the case will be re-opened and considered anew, and the registrant is reclassified, although the classification may not change. If given the same classification, the registrant has the right to appeal classification to the Selective Service appeal board within ten days. The appeal board makes final classificaation in this case unless there is at least one dissenting vote, in which event the individual may appeal his classification to the President of the United States, again within ten days after being notified of action taken by the appeal board.

Terminal Leave

Uncertainty regarding the policies of the armed services concerning terminal leave and its application toward time spent on active duty with the armed forces has existed in the past. During World War II when an officer was released from active duty, he was placed on terminal leave for the period of leave which he had accumulated up to the date of his separation from service. The officer was still considered as being on active duty until completion or termination of accrued leave. This is *not* the case at present. An officer released from active service, according to present regulations, receives a lump sum payment for his accumulated terminal leave and becomes a civilian the day he is separated from service. This policy regarding terminal leave was set into operation on September 1, 1946.

For the period prior to September 1, 1946, terminal leave up to 120 days is counted as time served on active duty in determining a doctor's priority rating; subsequent to that date, terminal leave for which a lump sum payment was made at time of separation is not counted as time served on active duty.

Recent Surveys

Recent surveys to determine the potential strength of the armed forces should Congress declare a state of war or a

national emergency have been conducted by the various branches of the armed services. These surveys are initiated through the office of the Executive Secretary of the State Advisory Committee. Each survey usually consists of obtaining information from the reservist, the local advisory committee concerned, and ultimately the State Committee. All data obtained in these surveys are transmitted to the specific branch of service conducting the survey.

Fourth Army headquarters recently conducted a survey to determine the Mobilization Availability Classification of physicians, dentists, and veterinarians should a national emergency occur. The local advisory committee concerned and the State Committee were requested to place the reservist in mobilization availability category A, B, C, D, or E. Category A included those persons who would be available for active duty within the first 30 days after a national emergency is declared; category B, those available from 31 to 90 days; category C, those available within 91 to 180 days; category D, those available from 181 to 365 days; and, category E, those not available within the first 365 days. This mobilization availability category survey was not concerned with priority rating under the terms of Public Law 779, and classifications A, B, C, D, or E had no bearing on priority rating for the individual concerned. It was merely an attempt on the part of the Department of the Army to evaluate its potential strength should war be declared or should Congress declare a state of national emergency.

Deferment

There are a few in priorities 1 and 2 who, because they are essential for teaching, for research, or for public health services or because they are rendering medical or dental service in isolated communities, should be deferred until replacements for them can be secured. Some residents should be deferred if their services are required to meet minimum essential needs of medical and dental schools or hospital services.

The National Advisory Committee has listed the following as scarcity specialties for the purposes of deferments: anesthesiology, physical medicine and rehabilitation, psychiatry, radiology, neurology, pathology, public health, orthopedic surgery, oral surgery, and the basic medical sciences. Insofar as possible, however, hospitals should make every effort to offer residencies to physicians who are in priority 3 or 4 and who are not subject to call to active duty at an early date.

At present priority 1 has not been exhausted. and it appears that priority 2 registrants will not be needed for at least two months, provided the present military picture remains the same. Special registrants in priorities 1 and 3 will be called to active duty according to age, with the youngest being ordered to duty first. Those classified in priorities 2 and 4 will be ordered to active duty with the armed forces according to time already spent on active duty, with those having served least being called first.

Release from Duty

The State Advisory Committee has received from national headquarters information regarding the present policies of the Department of the Army, Department of the Navy, and Department of the Air Force concerning release from active duty as gauged by time served on active duty.

It is the policy of the Department of the Army that any reservist who was ordered involuntarily to active duty as an individual (not as a member of a unit) and who served on active duty for a period of twelve months or longer during World War II, will be released on his own application after serving seventeen months' active duty subsequent to June 25, 1950, unless he is declared a critical specialist by the Army, in which case he may be held for the period for which he was ordered to active duty. Doctors called to active duty with the Army prior to July 9, 1951, were ordered to serve for a period of *twenty-one* months; those called on or after July 9, 1951, were ordered to serve for *twenty-four* months.

Physicians and dentists in the Naval Reserve may be released from active duty after serving a period of twelve to twenty-four months, depending on their respective priority ratings.

Air Force Reserve physicians, dentists, and veterinarians may request separation after serving a period of twenty-one months. If the person concerned was classified in priority 1 or 2, the twenty-one months of service must be during his present term of active duty.

Copies of Correspondence

The State Advisory Committee endeavors to obtain as much information as possible regarding the military status of every person subject to the provisions of Public Law 779, Eighty-First Congress so as to have file data relative to every case brought to the State Committee for action. Therefore, a copy of all local advisory committee recommendations and a copy of all important correspondence pertaining to persons under the jurisdiction of local advisory committees should be forwarded to the office of the Executive Secretary.

PAN AMERICAN SANITARY COUNCIL MEETS

The directing council of the Pan American Sanitary Organization, public health organ of the twenty-one American republics and regional committee for the Americas of the World Health Organization, mapped plans for the year when it met in Washington from September 24 through October 3.

Public health programs to be carried out by the Pan American Sanitary Bureau in cooperation with health authorities of the various American countries will emphasize insect control, maternal and child health, public health nursing, nutrition, public health administration, sanitary engineering, veterinary public health, and epidemiological and statistical services.

Emphasis at the meeting was laid on long-range planning, both as to financing and programs. Insect eradication was placed high on the list of essential activities. Steps were taken to revise the Pan American Sanitary Code, signed by the member republics in 1924, to conform with the International Sanitary Regulations adopted by the World Health Organization last May. The council resolved to bring to the attention of health authorities in the Americas the recommendation of WHO that sanitary and environmental conditions, especially in the area of ports and airports, be improved to prevent the spread of quarantinable diseases.

The first Inter-American Congress of Public Health, planned for September 27-October 1, 1952, in Havana under the joint sponsorship of the government of Cuba and the Pan American Sanitary Bureau, was discussed. A system for assessing the three European states (France, the Netherlands, and the United Kingdom) which have an interest in the non-self-governing territories in the Americas was adopted, together with a plan of granting to those states a vote on budgetary matters provided they contribute equitably to the budget.

The council officially recognized the Pan American Medical Confederation, a nongovernmental organization of most of the national medical associations of the Americas.

Industrial Medicine Fellowships Offered

Eight fellowships in industrial medicine for the 1952-1953 academic year are being offered by the Atomic Energy Commission to citizens of the United States who hold a

degree of doctor of medicine from an approved medical school and have had at least one year of internship. The fellowships are for one year of academic training at approved institutions. After completion of this training, fellows may apply for a second year's in-plant training at one of the major installations of the Atomic Energy Commission. Applications should be submitted by January 1, 1952, to Atomic Energy Commission Fellowships in Industrial Medicine, Atomic Energy Project, University of Rochester School of Medicine and Dentistry, Rochester, N. Y., Attention of Dr. H. A. Blair.

Research in Muscular Dystrophy at Baylor

A research program in muscular dystrophy is being instituted at Baylor University College of Medicine, Houston, with a grant from the National Muscular Dystrophy Research Foundation, which has made funds available to initiate and operate the program for approximately a year. The investigation of neuromuscular disorders will be under the Department of Neuropsychiatry and the Department of Physiology.

The National Muscular Dystrophy Research Foundation, organized last year through the efforts of Misses Sallie and Nadine Woods, Liberty sisters who are victims of the disease, includes on its board of trustees prominent scientists and business men from throughout the United States. Only recently have accurate statistics about the disease become available, but now it is known that approximately 100,000 persons in this country suffer from the crippling condition, which exhibits a familial tendency. The Cornell Medical Center and the University of Utah Medical School are the only other places in the United States where extensive research in this field is being carried on.

LIBRARY SECTION

PACKAGE SERVICE

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Request for packages should be addressed "Library, Texas Medical Association, 700 Guadalupe Street, Austin, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Packages are allowed to remain in the hands of the borrower for 14 days.

ACCESSIONS

The following additions were made to the Library during October:

Reprints received, 777.

Journals received, 312.

Books received, 22.

Peptic Ulcer, Clinical Aspects, Diagnosis, Management, Sandweiss; *Atlas of Normal Radiographic Anatomy,* Meschan; *Psychosomatic Gynecology, Including Problems of Obstetrical Care,* Kroger, W. B. Saunders Company, Philadelphia.

Grouping, Typing and Banking of Blood, Pollak; *Epileptic Seizure Patterns,* Penfield and others; *The Normal Cerebral Angiogram,* Ecker; *Congenital Dislocation of the Hip,* Hass; *Comparative Physiology of the Thyroid and Parathyroid Glands,* Fleischmann; *Surgical Measures in Hypertension,* Smithwick; *Thyroid Function—Its Possible Role in Vascular Degeneration,* Kountz; *Outline of Fundamental Pharmacology,* Marsh, Charles C. Thomas, Springfield, Ill.

Annual Report, 1950, Rockefeller Foundation, New York.

Digest of Official Actions, 1922-1946, American Dental Association, Chicago.

Yearbook of Pediatrics, 1951, Poncher, editor, Yearbook Publishers, Chicago.

Surgical Care, Practical Physiologic Guide, Elman; *Rosenau's Preventive Medicine and Hygiene,* Maxcy, Appleton-Century-Crofts, Inc., New York.

Annual Report on Stress, 1951, Selye, Acta, Inc., Montreal, Canada.

Trends in Gerontology, Shock, Stanford University Press, Stanford, Calif.

Transactions of the International and Fourth American Congress on Obstetrics and Gynecology, Kosmak, C. V. Mosby Company, St. Louis.

Scoliosis, Pathology, Etiology and Treatment, Kleinberg; *Diseases of the Ear, Nose and Throat,* Portmann, Williams and Wilkins, Baltimore.

Malignant Diseases of the Female Genital Tract, Way, Blakiston Company, Philadelphia.

SUMMARY OF SERVICE

Local users, 68.	Borrowers by mail, 46.
Local packages, 38.	Packages mailed, 54.
Items borrowed, 447.	Film borrowers, 84.
	Films loaned, 60.

MOTION PICTURE FILM LIBRARY

Motion picture films on medical subjects, 16 mm., both silent and sound, some in color, and suitable for either medical or lay audiences, are available for loan to county medical societies, hospital staffs, or individual physicians, on request. Borrowers will be requested to pay only the cost of shipment of the films, by express, with insurance, and for any damage to films in the hands of the borrower.

Request for films should be addressed to "Motion Picture Film Library, Texas Medical Association, 700 Guadalupe Street, Austin, Texas." A list of available films with descriptions, will be furnished on request.

The following motion pictures were loaned by the Library during the month of October:

Analgesia, Continuous Caudal (Becton, Dickinson and Company)—Denton County Graduate Nurses Association, Denton.

Anesthesia, Novocain, in Obstetrics (Winthrop-Stearns, Incorporated)—Brackenridge Hospital School of Nursing, Austin.

Anesthesia, Regional (Winthrop-Stearns, Incorporated)—David Granberry Memorial Hospital, Naples.

As Others See Us (American Hospital Association)—Veterans Administration Hospital, Marlin, and Scott and White Memorial Hospitals School of Nursing, Temple.

Aureomycin, The Versatile Antibiotic (Lederle Laboratories)—Pre-Medical Club, Baylor University, Waco, and Dr. C. W. Schoenvogel, Brenham.

Be Your Age (Metropolitan Life Insurance Company)—Monsanto Chemical Company First Aid Class, Texas City.

Behind the Shadows (Texas Tuberculosis Association)—University of Houston, Houston.

Blood Transfusion (British Information Services)—David Granberry Memorial Hospital, Naples.

Breast Cancer: The Problem of Early Diagnosis (Amer-

ican Cancer Society)—Brackenridge Hospital School of Nursing, Austin, and Santa Anna Hospital Staff, Santa Anna.

Breast Plastic: One-Stage Operation for Pendulous Breasts (Dr. Philip Thorek)—Dr. John W. Tunnell, Taft, and David Granberry Memorial Hospital, Naples.

Breast Self-Examination for Women (American Cancer Society)—Schulenburg Literary Club, Schulenburg; Program Committee, Grayson County Medical Auxiliary, Sherman; and Brackenridge Hospital School of Nursing, Austin.

Breech Extraction with Forceps (Mead Johnson)—Santa Anna Hospital Staff, Santa Anna.

Cancer: The Problem of Early Diagnosis (American Cancer Society)—Tahoka Hospital, Tahoka.

Cardiovascular Anomalies, Congenital, Amenable to Surgery (Mead Johnson)—David Granberry Memorial Hospital, Naples.

Cervical Smear (Dr. Karl John Karnaky)—Dr. John W. Tunnell, Taft, and Surgical Service, U. S. Army Hospital, Fort Hood.

Cesarean Section, A Low Cervical (Mead Johnson)—Dr. John W. Tunnell, Taft.

Chest Disease, Surgery in (British Information Services)—Medical and Surgical Clinic, Laredo.

Cholecystectomy (Mead Johnson)—Scott and White Memorial Hospitals School of Nursing, Temple.

Coarctation of the Aorta, Surgical Treatment for (Dr. Philip Thorek)—Dr. John T. Lowry, Laredo.

Coming Home (Texas Tuberculosis Association)—Brackenridge Hospital School of Nursing, Austin.

Diphtheria and Croup (Lederle Laboratories)—Lillie Jolly School of Nursing, Memorial Hospital, Houston.

Doctor Speaks His Mind, The (American Cancer Society)—Ragland Clinic-Hospital, Gilmer; Rotary Club, Gilmer; and The Johns Clinic and Hospital, Taylor.

Dwarfism (Mead Johnson)—Dr. John T. Lowry, Laredo.

Dysmenorrhea, Primary (G. D. Searle and Company)—Dr. John W. Tunnell, Taft, and Shannon Hospital Obstetrical Staff, San Angelo.

Empyema, The Treatment of (Mead Johnson)—Lillie Jolly School of Nursing, Memorial Hospital, Houston.

Esophagus, Surgical Treatment for Carcinoma of the Lower End of (Dr. Philip Thorek)—Surgical Staff, Seton Hospital, Austin, and West Texas Hospital, Lubbock.

Eyelids, Surgery (Dr. Ray K. Daily)—Southwestern Pre-Medical Association, Southwestern University, Georgetown.

Eyes for Tomorrow (Hurst Eye, Ear, and Throat Clinic)—Parent-Teacher Association, Beeville.

Forty Billion Enemies (Westinghouse Electric and Manufacturing Company)—David Granberry Memorial Hospital, Naples.

From Moo to You (The Borden Company)—David Granberry Memorial Hospital, Naples.

Gastrectomy, Safer (Billy Burke Productions)—Scott and White Memorial Hospitals School of Nursing, Temple; Littlefield Hospital, Littlefield; and Dr. C. W. Schoenvogel, Brenham.

Gastroscopy, Role of, In Gastric Pathology (Harrower Laboratory)—Dr. C. G. Goddard, Bastrop.

Hemicolectomy for Carcinoma of the Right Side of the Colon (Dr. Philip Thorek)—Littlefield Hospital, Littlefield, and Dr. B. L. Burditt, Del Rio.

Hepatitis, Observation on (Mead Johnson)—Robert B. Green Hospital, San Antonio.

Here's Health the American Way (American Medical Association)—Southwestern Pre-Medical Association, Southwestern University, Georgetown.

Injuries, Athletic, Care and Prevention (Becton, Dickinson and Company)—Dr. B. L. Burditt, Del Rio.

Lesions of Vulva, Vagina and Cervix (Dr. Karl John Karnaky)—Henderson County Medical Society, Athens.

Megacolon, Total Colectomy with Ileoproctostomy for Hirschsprung's Disease (Dr. Philip Thorek)—Surgical Staff, Seton Hospital, Austin.

Normal Delivery (Mead Johnson)—Dr. John W. Tunnell, Taft.

Once Upon a Time (Metropolitan Life Insurance Company)—David Granberry Memorial Hospital, Naples.

Poliomyelitis, Sister Kenny Method of Treatment of (Dr. Herbert Hipps)—Dr. John W. Tunnell, Taft.

Premature Infant, Care of (Mead Johnson)—Dr. John W. Tunnell, Taft.

Pyloric Stenosis, Congenital, Surgical Treatment for (Dr. Philip Thorek)—Dr. C. W. Schoenvogel, Brenham.

Roentgen Pelvimetry (Mead Johnson)—Tahoka Hospital, Tahoka.

Scarlet Fever (Lederle Laboratories)—Lillie Jolly School of Nursing, Houston.

Splenic Flexure Carcinoma, Surgical Treatment for, with Solitary Liver Metastasis (Dr. Philip Thorek)—Littlefield Hospital, Littlefield, and Dr. John T. Lowry, Laredo.

Spontaneous Delivery (Mead Johnson)—Woman's Club, Bishop, and Graduate School of Social Work, The University of Texas, Austin.

Sutures Since Lister (Johnson and Johnson)—Southwestern Pre-Medical Association, Southwestern University, Georgetown.

TB, This Is (Texas Tuberculosis Association)—The University of Houston, Houston.

Techniques of Injection (Becton, Dickinson and Company)—Dilley Clinic and Hospital, Dilley.

They Do Come Back (Texas Tuberculosis Association)—Brackenridge Hospital School of Nursing, Austin.

The Traitor Within (American Cancer Society)—Ragland Clinic Hospital, Gilmer; Rotary Club, Gilmer; and Grayson County Medical Auxiliary Program Committee, Sherman.

Trichomonal and Monilial Vaginitis (G. D. Searle and Company)—Littlefield Hospital and Clinic, Littlefield.

Tuberculosis, Role of the Public Health Nurse in (Texas Tuberculosis Association)—Brackenridge Hospital School of Nursing, Austin, and The University of Houston, Houston.

Urologic Conditions, Diagnosis of (Winthrop-Stearns, Incorporated)—Dr. C. G. Goddard, Bastrop.

Uterosalpingography (E. Fougera and Company)—Littlefield Hospital and Clinic, Littlefield.

Varicose Veins and Their Complications (Becton, Dickinson and Company)—Littlefield Hospital, Littlefield, and Dr. C. W. Schoenvogel, Brenham.

Varicose Veins, Treatment of (G. D. Searle and Company)—Dilley Clinic Hospital Staff, Dilley, and Littlefield Hospital, Littlefield.

What Is Cancer? (American Cancer Society)—Dilley Clinic Hospital, Dilley, and The Johns Clinic and Hospital, Taylor.

You Can Help (Texas Tuberculosis Association)—Ranger Lions Club, Ranger, and Brackenridge Hospital School of Nursing, Austin.

BOOK NOTICES

[1]Progress in Clinical Endocrinology

Edited by Samuel Soskin, M. D., Director, Medical Research Institute, Michael Reese Hospital; Dean, Michael Reese Hospital Post-graduate School; Professorial Lecturer in Physiology, University of Chicago, Chicago. Cloth, 622 pages. $10. New York, Grune and Stratton, 1950.

Our knowledge of endocrinology is in a formative state with many unexplained phenomena and many theoretic ex-

[1]*Mavis P. Kelsey, M. D., Houston.*

planations and empiric procedures. No one has enough knowledge of the complex maze of experimental data to apply it to endocrinology, hence the present textbooks on general endocrinology are full of controversial matter and the time for a good textbook has not arrived. However, for many phases of endocrinology, this book will serve as a stopgap until a good textbook can be written. It has excellent summaries by leading authorities suitable for the internist, the general practitioner, the intern and resident, and the student who is preparing a presentation.

Hyperthyroidism and its treatment are covered adequately. The chapter on radioiodine is weak. Hyperthyroidism and hypothyroidism are covered concisely. The adrenal cortex is particularly well discussed with regard to the adrenogenital syndrome, Cushing's syndrome, and Addison's disease. Tests of adrenal function are adequately discussed, as is pheochromocytoma. Chapters on the clinical aspects of diabetes are excellent. The article on spontaneous hypoglycemia by Conn places undue emphasis on functional hyperinsulinism, a diagnosis which is made far too frequently and which leads to much abuse in the practice of endocrinology. There is adequate discussion of the ovary, but insufficient space is given to the testis and the pituitary.

In general, this is an excellent book. It is practical, concise, and singularly free of the many misconceptions prevalent in endocrinology or pseudo-endocrinology.

[2]Savill's System of Clinical Medicine

Edited by E. C. Warner, M. D., F.R.C.P. Thirteenth edition. Cloth, 1,137 pages. $7. Baltimore, Williams and Wilkins Company, 1950.

Covering the entire field of medicine, this revised book begins with a chapter on clinical methods, properly emphasizing "case taking," and ends with a list of useful prescriptions, not omitting minute directions and ingredients for Nauheim Baths.

There is overemphasis of some subjects at the expense of others. Diabetes is presented rather sketchily. Seven pages, with drawings, are devoted to urinary deposits. The section directed to disorders of the blood is adequate, but one wonders why it is included in a chapter on "General Debility, Pallor, and Emaciation." Ten pages are devoted to transfusions, with minute descriptions of technique. X-ray illustrations are well selected but it would be preferable if the original negatives had been retained. Sixty-four pages are devoted to disorders of the skin, a distinct asset to the book.

The authors still hold to some older concepts of symptom complexes; American medical readers will be gratified to learn that one should treat the "toxic absorption" caused by visceroptosis by giving "paraffin and bassorin preparations together with aperients."

With continued use of the book, one grows accustomed to the small print and condensed form. Certainly the volume contains a tremendous amount of useful information in the handling of common medical conditions. Indeed, it is a relief to be able to pick up a medical reference book with one hand; the weight is three and three-fourths pounds, as compared with eight and one-half pounds for a recently published American textbook.

[3]Paul Ehrlich

Martha Marquardt. Cloth, 255 pages. $3.50. New York, Henry Schuman, 1951.

Three decades after Ehrlich's death his loyal and understanding secretary has given the story of her chief as a man. She has told a vivid story of great achievement, with sidelights on the man's amusing eccentricities, his simple kindness, and above all, his amazing capacity for tireless concentration on his work.

"Ehrlich is a man whom one can love as a child is loved," said a distinguished colleague. As we see Ehrlich the indispensable coadjutor of von Behring in developing the diphtheria antitoxin and of Koch in finding a suitable stain for tubercle bacilli, as the originator of the side-chain theory, over which we of the American medical colony in Berlin pored eagerly in 1903, as the discoverer of 606, and as we see him in his home and with his co-workers, we must agree that he was a man to be loved.

An excellent estimate of Ehrlich's place in the world of medical science is given by Sir Henry Dale, once a student in the master's laboratories. It is interesting to note that the high-born von Behring, succeeded in doing his naive young Jewish collaborator out of some half million marks, his share, according to contract, of the proceeds from the manufacture of diphtheria antitoxin.

This is an interesting and informative book.

[4]Chest X-Ray Diagnosis

Max Ritvo, M. D., Assistant Professor of Radiology, Harvard Medical School; Instructor in Radiology, Tufts Medical School; Roentgenologist-in-Chief and Director, Department of Radiology, Boston City Hospital; Associate Radiologist, Beth Israel Hospital; Radiologist, Jewish Memorial Hospital, Jewish Tuberculosis Sanatorium of New England, Revere Memorial Hospital, and Hudson Hospital, Boston. Cloth, 542 pages. $15. Philadelphia, Lea and Febiger, 1951.

The author opens his preface with, "A roentgen method of physical examination is now universally accepted as an important adjunct to the clinical examination of the patient. . . . Since the data derived from the roentgen examination of the chest are of such great importance, it is essential for the clinician to have an understanding of the nature, value, and limitations of the method."

Much may be said for Dr. Ritvo's treatise in following out these two statements. The book is divided into ten sections and deals entirely with the chest and the contents of the thoracic cage. The first section, for instance, is devoted entirely to the lungs, the second to the mediastinum, the third to the diaphragm, the fourth to the pleura, and so on. In each one of these systems the normal is taken up first and subsequently pathologic changes in the degree of their occurring severity. The pathology is not always confined to the particular system under consideration but to any other system of the body that may be affecting the particular system or structures undergoing examination. For instance, in Section 6 "The Soft Tissues of the Neck," the subheading "Neurogenic Lesions of the Pharynx and Larynx" includes bulbar palsy, myasthenia gravis, and recurrent pharyngeal paralysis. This is, I think, somewhat of a departure from the usual procedure of confining descriptive and diagnostic work to the findings present in the specific tissues that are being dealt with. It is well known of course, not so much in roentgenology as in other branches of medicine, that often one system of the body will be profoundly influenced by disease in another. Certainly to the clinician this factor is occasionally helpful, and it is by recognizing disease in the various systems that x-ray contributes in the diagnostic procedure to clinical medicine. This point is stressed by Dr. Ritvo.

References and illustrations are abundant and in each instance are immediately at hand. The references follow each section and each anatomic system. Abundant illustrations (615 in a 540 page book) are labeled without equivocation according to the disease which they represent. Following the diagnosis there is a technical description and both of

[2]*Erle D. Sellers, M. D., Abilene.*
[3]*W. R. Houston, M. D., Austin.*
[4]*H. E. Holtz, M. D., Austin.*

these constitute the caption of the illustration. So often technical descriptions consisting of such terms as "striations" and "areas of infiltration" without any reference to what they mean diagnostically are seen. Dr. Ritvo has avoided such descriptions and thereby has made his work more valuable to both the clinician and the roentgenologist. This book is of exceeding value to the general practitioner and the specialist alike, as a reference and a review both of old established criteria and of new diagnostic findings which in themselves are specific or contributory. The volume no doubt will establish itself as one of the most used references in any library.

[5]The Diagnosis of Salmonella Types

F. Kauffmann, M. D., Chief, International Salmonella Center, State Serum Institute, Copenhagen, Denmark. Lexide, 86 pages. $2.25. Springfield, Charles C. Thomas, 1950.

In view of his years of work in the Salmonella field Dr. Kauffmann is eminently qualified to write this monograph. It is a small volume consisting of a summary of the major aspects of the identification of Salmonella types and includes much specific material.

The chief usefulness of this work would appear to be as a reference manual in the hands of an experienced and well trained bacteriologist. It presupposes a rather extensive technical and immunologic background and would be of little value to one not so trained. In the average hospital laboratory, where no Salmonella antiserums are available, it would have only slight practical application. In larger and better equipped laboratories it could prove invaluable as a source of highly specific information in what is a limited but nevertheless highly important field.

[6]Occupational Therapy

Edited by William Rush Dunton, Jr., M. D., Founder and Former Editor of Occupational Therapy and Rehabilitation; and Sidney Licht, M. D., Editor, Occupational Therapy and Rehabilitation. First edition. Fabrikoid, 313 pages. $6. Springfield, Charles C. Thomas, 1950.

This book will give the physician an excellent insight into the principles and practice of occupational therapy. It is pointed out that the theories of occupational therapy have been used throughout the ages to aid in healing the body and mind.

The usefulness of occupational activity is discussed in relation to improvement of muscle strength, joint mobilization, coordination, work tolerance, and muscle and mental tone; also, its use in influencing psychomotor activity, promoting contentment, and improving mental hygiene. Throughout the book, emphasis is placed on the psychologic aspects of rehabilitation of the disabled patient.

In the treatment of psychiatric disorders occupational therapy gives the patient opportunity toward resocialization and opportunity to sublimate symptoms and provides outlets for hostility and aggression and opportunities for creativeness. For orthopedic, neurologic, and surgical patients graduated activity is used to improve muscle strength and coordination, to mobilize joints and scar tissues, and to establish activity patterns. Arm amputees can be taught to use remaining parts skillfully, with or without mechanical aids, depending on the needs of the patient. For the patient with tuberculosis, occupational therapy provides graded activity. The cerebral palsy patient is helped to develop hand dominance and skills and is trained in self care.

The book gives detailed discussions on tuberculosis, neuropsychiatric disorders, and heart disease. These chapters provide excellent reading for occupational therapists. The section on drama therapy presents a fascinating review of the use of drama in treatment of psychiatric problems.

[7]Clinical Unipolar Electrocardiography

Bernard S. Lipman, A. B., M. D., Assistant in Medicine, Emory University School of Medicine, Atlanta, Georgia; and Edward Massie, A. B., M. D., F.A.C.P., Assistant Professor of Clinical Medicine, Washington University School of Medicine; Director of Heart Station, Barnes Hospital, St. Louis; Director, Cardiovascular Clinic, Washington University Clinics. Cloth, 226 pages. $5. Chicago, Year Book Publishers, 1951.

At last the medical world may proclaim that there is available a textbook on electrocardiography which is a simple, concise, and accurate exposition of the Wilson concept of unipolar electrocardiography. It surveys all recent clinical and laboratory research on electrocardiography, based on Wilson's original work.

As stated in the preface, "the subject is approached in an elementary, clear, concise, although be it dogmatic, fashion." However, dogmatism is not applied to the point that the theories of unipolar electrocardiography are accepted as established facts.

A study of cardiac arrhythmias is omitted. Essential principles of physics and cardiac physiology are included. The bibliography is complete, containing 12 pages of references to all the current literature on electrocardiography, references summarized and incorporated into this textbook. There is a section of illustrative unipolar electrocardiograms which completely covers the field.

But the study of electrocardiography marches on with amazing speed. Even this book fails to note the plausible explanation recorded in a recent publication of the persistence of the S-T segment elevation which is found in ventricular aneurysms. In the immediate future, further advances in the study of electrocardiography undoubtedly will make this book partially obsolete, but the basic principles recorded and the clear exposition of these will always be modern and fundamental to any more advanced understanding of electrocardiography.

In addition to the discussion of physiologic principles, the electrical position of the heart, patterns of ventricular enlargement, bundle branch block, myocardial infarction, and other abnormal electrocardiographic patterns, some space is given to an elementary but clear exposition of ventricular gradient. Fortunately, for the sake of clarity and conciseness, spatial vectorcardiography is not mentioned.

This book should be available to all students and as a reference book to all internists.

[8]Principles and Practice of Surgery

Jacob K. Berman, A. B., M. D., F.A.C.S., Indianapolis, Associate Professor of Surgery, Indiana University School of Medicine; Associate Professor of Oral Surgery, Indiana University School of Dentistry; Chief Consultant in Surgery, Billing's Veterans Administration Hospital, Fort Benjamin Harrison, Indiana; Director of Surgical Education and Surgical Research, Indianapolis General Hospital. Cloth, 1,354 pages. $15. St. Louis, C. V. Mosby Company, 1950.

The purpose of this book, as stated in the preface, is to correlate the basic sciences and fundamental principles of surgery and to stimulate the medical student to search through the selected references for more complete information. This book is divided into five parts: general considerations of surgical principles, local response and general body

[5]*Marjorie J. Williams, M. D., Ch. B., and Mary P. Clapp, M. S., Temple.*
[6]*Oscar O. Selke, Jr., M. D., Houston.*
[7]*W. B. Whiting, M. D., Wichita Falls.*
[8]*Elliott B. Hay, M. D., Houston.*

reactions to injury, general reactions to injury, reactions of tissues and organs to trauma of unknown origin, and diseases and injuries of specific organs and systems.

Chapter I is a historical review and although abbreviated is well done. The reference to Hippocrates as "a real character," however, is hardly necessary for brevity. The chapter dealing with local response and general reactions to injury are good. The one on shock is worth reading but has so many glaring errors it can hardly be used as a text on the subject. The author has several classifications and diagrams of shock that are not practical because of mistakes in physiologic background.

The sections on the circulatory and respiratory systems are particularly well done and are up to date, especially the discussion of those conditions pertaining to embryologic defects. The section on the alimentary system is good but could not be used as a text because of such statements concerning appendicitis as "rectal examinations are done, especially in children." Surgery of the biliary system is amply covered along with functional disturbances. Inclusion of the liver and pancreas under the heading of glands is puzzling.

The author has a fair number of excellent photographs; however, the quality of the illustrations leave much to be desired. The references are extensive and inclusive with a large number of foreign references.

The author, a brilliant clinical surgeon, has written a fairly well organized book which is delightful reading and which would make a good addition to the practicing surgeon's library but which is not too well suited for the student. Books attempting to cover such a broad scope, to correlate knowledge in constant flux, and to simplify the complex and sometimes "unconquered ground" of surgical diseases are too much for any one author to finish in time for the material to be of much use to a medical student. This book has the same faults of most textbooks written by one man: emphasis and clarification of those diseases in which the author is most interested and confusion and ambiguity on those subjects for which he has little interest.

[9]The External Secretion of the Pancreas

J. Earl Thomas, M. D., Professor of Physiology, Jefferson Medical College of Philadelphia, Philadelphia. Cloth, 136 pages. $3.50. Springfield, Charles C. Thomas, 1950.

This monograph fills a need for those interested in the fundamentals as related to diseases of the pancreas. The subject is considered in a comprehensive yet practical manner and will have a great appeal to those desiring facts without lengthy discussion. It represents the observations and opinions of the author and others working in this field. Related historic high lights are described succinctly and are often associated with sketches.

The monograph is clearly written and well organized.

[9]*Gordon F. Madding, M. D., San Angelo.*

ORGANIZATION SECTION

TEXAS MEDICAL ASSOCIATION

AMERICAN MEDICAL ASSOCIATION DELEGATES

Fourteen physicians are prepared to serve the Texas Medical Association when the House of Delegates of the American Medical Association meets. Seven of these are delegates; seven are alternates who substitute as delegates or act as assistants to them.

Alternate delegates serving now are Drs. James H. Wooten, Jr., Columbus; Robert W. Kimbro, Cleburne; L. C. Heare, Port Arthur; J. C. Terrell, Stephenville; George A. Schenewerk, Dallas; Arthur C. Scott, Jr., Temple; and George Turner, El Paso. After January 1, those who will act as alternates will be Drs. Wooten, Kimbro, Heare, Terrell, Scott, Turner, and M. O. Rouse, Dallas.

Delegates for this year and next are the following:

Dr. Allen T. Stewart, Lubbock, is a general practitioner with special interest in obstetrics. He represents Texas, Oklahoma, and Kansas as a member of the A.M.A. Committee on Rural Health. As incoming President of the Texas Medical Association, he was the subject of a biography in the May, 1951, JOURNAL.

Dr. Robert B. Homan, Jr., El Paso thoracic surgeon, as Speaker of the House of Delegates was one of the officers whose biographies appeared in the October issue of the JOURNAL.

A general practitioner, *Dr. Brittain Elbridge Pickett, Sr.,* Carrizo Springs, is the chairman of the Texas delegation and a past president of the Texas Medical Association. Dr. Pickett was born January 5, 1877, in Smithville, Ark. Prior to completion of his medical studies he taught in the Arkansas schools. He was awarded a medical degree by the University of Louisville Medical Department, Louisville, in 1908. Beginning practice in Ravenden Springs, Ark., in 1902, he moved in 1910 to Carrizo Springs, where he has remained until the present. During World War I he served as a first lieutenant in the United States Army.

Delegates to American Medical Association

Above, left to right: Drs. E. H. Cary, Allen T. Stewart, T. C. Terrell.

Middle: Dr. B. E. Pickett, Sr.

Below: Drs. John K. Glen, J. B. Copeland, Robert B. Homan, Jr.

Dr. Pickett was a member of the State Board of Health from 1946 to February, 1951. Other medical honors have included membership in the American Medical Association House of Delegates since 1942 and membership on the Committee on the Constitution and By-Laws of that Association. His research activities have been principally in typhus fever. Dr. Pickett is married and has a son, who also is a physician. Travel is his hobby.

Dr. Edward Henry Cary, Dallas ophthalmologist and otolaryngologist, has long been associated with medical education in the Southwest. Born February 28, 1872, in Union Springs, Ala., he was an 1898 graduate of Bellevue Hospital Medical College, New York. From the beginning of his medical career in Dallas until 1943, when the school was moved to Houston, Dr. Cary was an influential figure in the history of Baylor University College of Medicine, having served in many capacities. In recognition of his long years of service, this institution in 1929 unveiled a bronze bust of Dr. Cary. In 1916 the honorary degree doctor of laws had been conferred upon him by Baylor University. Through the organizing in 1939 of the Southwestern Medical Foundation, Dr. Cary was a moving force in the establishment during World War II of a second Dallas medical teaching institution, Southwestern Medical School. He favored affiliation of this school with the University of Texas, which became an actuality in 1949.

Dr. Cary has served in many positions of trust in medical organizations, possibly the most outstanding of which have been the presidencies of the American Medical Association, the Texas Medical Association, and the Southern Medical Association. He was the first president of the Texas Society of Ophthalmology and Otolaryngology. Throughout its existence he headed the National Physicians Committee, a group which opposed the socialization of medicine.

Aside from his educational, medical, and business interests, Dr. Cary has taken an active part in the planning of Dallas; he is president of the Kessler Plan Association. In 1945 he received the Linz award as Dallas' most outstanding citizen. Dr. Cary is married and the father of three daughters and a son. He is a golf enthusiast.

Dr. Truman Conner Terrell, President-Elect of the Texas Medical Association, is a Fort Worth clinical pathologist. A native of Ranger, he was born February 9, 1890; his brother, the late Dr. C. O. Terrell, also was a physician, and another brother, S. D. Terrell, D.D.S., is a dentist.

Recipient of a degree from the University of Pennsylvania School of Medicine, Philadelphia, in 1911, Dr. Terrell practiced for a short while in Ranger before moving to Fort Worth. He taught clinical pathology and bacteriology at the Fort Worth School of Medicine from 1914 until May, 1918, then served as a first lieutenant in the United States Army until 1919. Dr. Terrell founded Terrell's Laboratories in 1915 and has been owner and director of that institution since then. His medical honors have been many; he formerly was president of the Tarrant County Medical Society, the Thirteenth District Medical Society, and the Southwest Medical Society, later known as the Kansas City Clinical Conference. Dr. Terrell until recently was a member and chairman of the Board of Trustees of the Texas Medical Association. He has served three terms as president of the Texas Society of Pathologists. For the past four years he has been a member of the State Board of Health. Dr. Terrell's hobbies are hunting and fishing, and his business interests include ranching and oil. He is married and has a daughter.

A Houston pediatrician, *Dr. John King Glen* was born June 16, 1899, in Cleburne. After receiving his medical degree in 1925 from the University of Texas School of Medicine, Galveston, he served an internship at City Hospital, Cleveland, Ohio, and a residency at St. Louis Children's Hospital, St. Louis. Dr. Glen began practice in 1930 in Houston, where he has continued his medical career to date with the exception of service with the United States Navy from 1942 to 1945. His medical affiliations include Harris County Medical Society and its related organizations, the American Academy of Pediatrics, and the Association of American Physicians and Surgeons. He is married and has two daughters.

Dr. Joseph Bryson Copeland, San Antonio general practitioner, was born August 27, 1904, in Waynesboro, Ga. He attended Tulane University of Louisiana School of Medicine, New Orleans, from which he received a medical degree in 1930. Serving an internship and residency at Robert B. Green Memorial Hospital, San Antonio, he started his medical career in that city in 1934. A member of the American Academy of General Practice, Dr. Copeland is chairman of the Council on Medical Jurisprudence of the Texas Medical Association and a member of the State Board of Health. In his leisure he enjoys hunting and fishing. Dr. and Mrs. Copeland are the parents of two sons and a daughter.

Telephone Broadcast Topics Set

Subjects for the telephone postgraduate broadcasts to be staged by the Texas Medical Association in 1952 have been selected by the Committee on Postgraduate Work to interest as many physicians as possible. The subjects announced are "Recognition and Treatment of Cardiovascular Emergencies," "Recognition and Treatment of Abdominal Emergencies," and "Some Psychiatric Principles in the Practice of Medicine" to be presented in that order.

Each of the monthly broadcasts will be conducted by a moderator with a participating panel of at least four. All of the participants will be well known physicians with a wealth of experience in the field under discussion. Each participant will speak briefly on some phase of the topic, and a round-table discussion will conclude the presentation. The Committee on Postgraduate Work invites physicians throughout Texas to send questions in advance for consideration during each broadcast.

A survey showed that the majority of county medical societies meet the second Tuesday of the month and that a number of societies already have programs scheduled for January. Consequently, the committee has decided to set the initial series of broadcasts for the second Tuesday of February, March, and April. It may be possible to record the programs and make them available to societies which cannot listen to the broadcasts on the dates designated.

To date 34 county societies have reported their reaction to the broadcast plans. Of them 28 voted to participate. Most of the groups declining meet infrequently, and in one of the areas where membership in the county society is scattered and meetings sporadic, a hospital staff decided to sponsor reception of the broadcasts and invite all physicians in the area to attend.

All inquiries and communications concerning the telephone broadcasts should be addressed to N. C. Forrester, acting executive secretary, Texas Medical Association, 700 Guadalupe, Austin.

AMERICAN MEDICAL ASSOCIATION

LOS ANGELES CLINICAL SESSION

Postgraduate study for the general practitioner will be emphasized during the 1951 clinical session of the American Medical Association from December 4 through 7 in Los Angeles.

Therapy will be stressed in clinical studies on problems the general practitioner meets in daily practice.

In addition to clinical discussions, scientific and technical

exhibits, and general lectures on basic problems, color television demonstrating surgery, clinical treatment, and examination procedure will be highlighted. Both scientific and technical exhibits will be located in the Shrine Convention Hall adjacent to the Al Malaikah Temple, where the lectures, clinical presentations, television reception, and motion picture showings will take place.

Dr. Michael E. DeBakey, Houston, is one of the seven members of the Council on Scientific Assembly under whose general direction the program was planned.

Special interesting and diversified activities have been planned for the wives who accompany their physician husbands to the session.

The fourth annual medical public relations conference of the American Medical Association will be held preceding the clinical session, December 2 and 3 in the Hotel Biltmore. The keynote address "Working Together in '52" will be delivered by Dr. Louis H. Bauer, Hempstead, N. Y., A.M.A. President-Elect, and Dr. Lewis A. Alesen, president-elect of the California Medical Association, will speak on "The Physician's Responsibility as a Leader."

Discussions, including several panels, will be on the following topics: "What the People Think," "The Cost Factor in Everyday Practice," "Medical Society Solutions to the Cost Problem," "Joining Forces with Other Groups," and "Where Do We Go from Here?"

Among various related organizations convening in conjunction with the clinical session is the American College of Chest Physicians, which will meet December 2. Information about the program may be obtained by writing the College, 112 East Chestnut Street, Chicago 11.

Doctors are urged to make hotel reservations in advance by writing to Chairman, A.M.A. Subcommittee on Hotels, 1151 South Broadway, Los Angeles 15.

ACCREDITATION OF HOSPITALS

A joint commission for the accreditation of hospitals, approved by the House of Delegates of the American Medical Association in June, now has been approved by all of the other cooperating organizations, the American Hospital Association, American College of Physicians, and American College of Surgeons. Thus, the way is open for establishment of the commission, which will be the final authority for the accreditation of hospitals, carrying out the standardization program previously sponsored by the American College of Surgeons. Surveys relating to internship and residency training will continue by the organizations that have conducted these programs in the past.

The joint commission will be composed of six members appointed by the American Medical Association, six by the American Hospital Association, three by the American College of Physicians, and three by the American College of Surgeons. If the Canadian Medical Association accepts an invitation to participate, that organization will appoint one representative, and the American Hospital Association will appoint an additional member from the Canadian hospitals. Operating expenses of the commission will be paid by the constituent organizations on a basis proportionate to their representation on the commission.

COUNTY SOCIETIES

Dallas County Society

September 11, 1951

(Reported by W. W. Fowler, Secretary)

Indications for Use of Digitalis and Quinidine—Franklin D. Johnston, Professor of Medicine, University of Michigan, Ann Arbor.

The scientific paper noted above was presented at the September 11 meeting of Dallas County Medical Society in Dallas, over which Charles L. Martin, president, presided. Mr. Dick Price, campaign chairman of the Dallas Community Chest, spoke briefly.

Nine new members were elected, and policies relative to announcements and listings of physicians were adopted. Memorial resolutions in honor of the late Drs. Robert B. Perkins, John W. Embree, and Julian H. Morris were read and adopted.

Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties Society

September 18, 1951

(Reported by Raymond W. Laycock, Secretary)

Dermatology for General Practitioners—Gerald Bednar, Oklahoma City.

Abuses of Blue Cross by Physicians and Hospitals—Representatives of Blue Cross, Dallas.

Ten of the most common dermatologic conditions were emphasized by Gerald Bednar, Oklahoma City physician, when he discussed dermatology for general practitioners at the September 18 meeting of the Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties Medical Society in Borger. Representatives of the Blue Cross office in Dallas discussed the abuses of the insurance plan by physicians and hospitals and distributed charts showing hospital and insurance costs.

Four new members were elected, two by transfer and two upon application. The financial status of the society was discussed, and the secretary was instructed to determine the amount of an assessment necessary to finance the remaining meetings of the year and to notify members of such assessment. The military procurement committee and physicians from Pampa held separate meetings to consider business of concern to each.

Thirty-seven members and guests were present for the dinner meeting.

Hardeman-Cottle-Foard-Motley Counties Society

September 27, 1951

(Reported by J. F. Hughes, Secretary)

Head and Spinal Cord Injuries—John Victor Ellis, Amarillo.

John Victor Ellis, Amarillo, was guest speaker at the barbecued lamb dinner held by the Hardeman-Cottle-Foard-Motley Counties Medical Society on September 27 in Crowell. Twenty-seven members and visitors attended.

Kerr-Kendall-Gillespie-Bandera Counties Society

October 8, 1951

(Reported by Dor W. Brown, Jr., Secretary)

Detection of Glaucoma by General Practitioners—John L. Matthews, San Antonio.

A new type of instrument designed to be used by any physician for detection of increased intraocular tension was demonstrated by John L. Matthews, San Antonio ophthalmologist, when he discussed glaucoma for the Kerr-Kendall-Gillespie-Bandera Counties Medical Society, meeting October 8, in Fredericksburg.

Dr. David McCullough, Kerrville, vice-president, presided in the absence of the president. He appointed Hugh A. Drane, Hunt, to study the proposed telephone broadcast being arranged by the Council on Medical Education and Hospitals of the Texas Medical Association.

The society voted to refer to the woman's auxiliary the essay contest on socialized medicine sponsored by the Association of American Physicians and Surgeons.

Lubbock-Crosby Counties Society

October 2, 1951

(Reported by John B. Rountree, Jr., Secretary)

A tumor clinic conference for practicing physicians of

District 3 and part of District 2 took the place of the regular October meeting of Lubbock-Crosby Counties Medical Society. Between sixty and sixty-five physicians attended the dinner and conference in Lubbock, October 2, conducted by the staff of the Nix Tumor Clinic of San Antonio and sponsored by the Texas Division of the American Cancer Society. Dudley Jackson, Dudley Jackson, Jr., D. A. Todd, and David Oliver, San Antonio, and John C. Long, Plainview, assisted with the program.

Potter County Society

September 10, 1951

Meeting in regular session September 10 in Amarillo, the Potter County Medical Society made plans for the booth it will sponsor at the Tri-State Fair in Amarillo this year. Amarillo druggists are to share the expense of the booth. A mobile unit from the State Department of Health will make chest x-rays during the fair and will be retained for use at the Amarillo High School the week after the fair.

Discussions included an announcement of the Cancer Society meeting October 1 in Amarillo, plans for a grievance committee, and changing the society's meeting time from 8 to 7:30 p. m. Accepted as members by transfer were Walter C. Watkins from Cecil County (Md.) Medical Society and William R. Klingensmith, Jr., from Harris County Medical Society.

Tarrant County Society

September 4, 1951

(Reported by W. P. Higgins, Jr., Secretary)

Tarrant and Dallas Counties Medical Societies held a joint meeting at Arlington Downs, September 4, with attorneys from both counties as guests. John Ben Shepperd, Austin, secretary of state, spoke to the group of approximately 500 who gathered for the barbecue dinner.

September 18, 1951

(Reported by W. P. Higgins, Jr., Secretary)

Intramedullary Pinning of Long Bones—I. L. Van Zandt, Fort Worth.
Discussion—Louis J. Levy, H. H. Womack, and William M. Crawford, Fort Worth.

Fifty-eight members and five visitors heard the scientific presentation noted above when Tarrant County Medical Society met September 18 in Fort Worth.

William Flood was elected to the board of censors to fill the unexpired term of DeWitt Claunch, who had resigned. One new member was elected upon application and three by transfer. L. H. Reeves spoke on the history of medicine and of organized medicine, representing the indoctrination committee; he was introduced by E. E. Anthony, Jr., who gave a report for the committee. Joseph F. McVeigh called attention to the Crusade for Freedom and the Diabetes Detection Drive, and T. C. Terrell to the North Texas-Southern Oklahoma Fall Clinical Conference in Wichita Falls.

Tribute was paid to members of the society who had died in recent months, including Drs. X. R. Hyde, C. O. Terrell, J. D. Covert, Ross Trigg, and Frank Sanders.

October 2, 1951

(Reported by W. P. Higgins, Jr., Secretary)

Prefrontal Lobotomy in Treatment of a Burned Patient; Presentation of Case—E. M. Cyrus, Jr., and W. W. McKinney, Fort Worth.
Discussion—Robert S. Spencer, Fort Worth.
Practical Management of Head Injuries for General Practitioner—Frederick C. Rehfeldt, Fort Worth.
Discussion—William Skokan, Gatlin Mitchell, and Hobart O. Deaton, Fort Worth.

Miss Pat Baxter, freshman student at Texas Christian University and winner of the $1,000 first prize in a national essay contest on socialized medicine sponsored last year by the Association of American Physicians and Surgeons, was guest at the October 2 meeting of Tarrant County Medical Society. Miss Baxter was interviewed by Joseph F. McVeigh, who presented her a gift on behalf of the society.

The scientific program outlined was given, and four new members were accepted upon application.

Tom Green-Eight County Society

October 1, 1951

(Reported by Gordon F. Madding, Secretary)

Functional Uterine Bleeding—W. H. McCaw, San Angelo.
Discussion—Joe Cornelison and Clay Johnson, San Angelo.

Twenty-eight members of Tom Green-Eight County Medical Society heard the paper named above when they met in San Angelo, October 1.

After an explanation of the bloodmobile to be in San Angelo three days in November, the society voted to approve the project, blood from which will be used in Korea. A plea from the Community Chest also was heard. The society postponed action on a program for crippled children proposed by the Young Women's League. A statement about medical care of the high school and junior college football teams was made by J. A. Bunyard, chairman of the athletic committee. Members of the society were requested to donate drug samples to the indigent clinic, and the society passed a motion approving this action.

The president, M. D. Knight, recommended that six names be chosen from the membership for presentation to the Tom Green Chapter of the National Foundation for Infantile Paralysis as a panel from which a committee could be appointed by the local chapter. Dr. Knight also appointed a committee to draw up resolutions on the late Dr. W. B. Everitt to be forwarded to his wife. The society voted to buy a book for the Shannon Hospital library as a memorial to Dr. Everitt.

DISTRICT SOCIETIES

Tenth District Society

September 20, 1951

Tumor Clinic—Staff of Baylor University College of Medicine, Houston, including Bromley S. Freeman, Instructor in Clinical Surgery (Plastic); David M. Earl, Professor of Radiology; Berne L. Newton, Assistant Professor of Pathology; Robert A. Hettig, Associate Professor of Medicine; and B. W. Haynes, Jr., Assistant Professor of Surgery.
Salivary Gland Tumors.
Pigmented Nevi and Melanomas.
Carcinoma of Thyroid.
Hodgkin's Disease.

Twenty-three members of the Tenth District Medical Society were present September 20 for a tumor clinic conducted at the Kersting Hospital, Liberty, by members of the staff of Baylor University College of Medicine, Houston. Prior to the clinic, the medical society, representatives of the district cancer society, and the general public convened in a general assembly. A luncheon and business session were held at noon.

The society will meet next in Lufkin in February.

Fifteenth District Society

Officers were elected and plans to increase attendance were discussed at a meeting of the Fifteenth District Medical Society held in Marshall at the close of the session of the Tri-State Medical Assembly, September 26.

Elected to office were C. B. Reed, Clarksville, president; E. W. Grumbles, Atlanta, vice-president; and William E. Jones, Texarkana, secretary-treasurer. The new officers will serve as a committee to propose methods of increasing attendance at district society meetings.

The 1952 meeting will be held in Texarkana during the Tri-State Medical Assembly meeting.

AUXILIARY SECTION

AUXILIARY NEWS

Bexar County Auxiliary

A talk on "Public Relations" by Mrs. O. W. Robinson, Paris, President of the State Auxiliary, was the feature of the first fall meeting of Bexar County Auxiliary in San Antonio, October 12. Mrs. Robinson approached her topic from the standpoint of the doctor's wife in relation to the public, legislation, health, and education. Mrs. Frank Paschal gave the invocation, and Dr. Lewis Pipkin brought greetings from the Bexar County Medical Society. Mrs. Charles L. McGehee, San Antonio, council woman of the Fifth District, was a special guest. Mrs. Herbert Hill, president of the county auxiliary, presided.

The auxiliary entered its fall activities with twenty-four new members. Reports were made of arrangements for a weekly broadcast of "Healthy Living in Our County" to be carried for twenty-nine weeks by radio station KTSA. The auxiliary's fall project centers in the Children's Shelter, for which members will sew one day a month, entertain the children, and redecorate the cottage. During the week of August 27, the auxiliary sponsored an intensive nurse recruitment program. Members appeared on television and radio in support of the drive.

Hostesses for the luncheon meeting were Mesdames T. E. Christian, August Herff, Ervin Lyon, Jr., J. B. Miller, and A. O. Severance.—Mrs. R. E. Nitschke, Publicity Secretary.

Grayson County Auxiliary

Nine new members were introduced at the October 12 coffee of Grayson County Auxiliary in Denison. Mrs. S. O. Levin, Denison, president, announced that the membership now numbers sixty-three including several associates from Perrin Field and the dentists' wives who participate.

The auxiliary adopted two resolutions from the 1951 convention of the Woman's Auxiliary to the American Medical Association, one endorsing the American Medical Education Foundation and the other pledging a continuation of efforts to defeat socialization of medicine. Mrs. W. A. Lee, Denison, reported that three students are using the auxiliary loan fund. Mrs. Max Woodward, Sherman, public relations chairman, urged the members to hold March 14 open for a showing of a health film in Sherman. Yearbooks were distributed by Mrs. John Hardy, Sherman, program chairman.

Mrs. W. N. Porter, musician-monologist of Denison, entertained the auxiliary.—Mrs. F. M. Sporer, Secretary.

Kerr-Kendall-Gillespie-Bandera Counties Auxiliary

Mrs. O. W. Robinson, Paris, President of the Woman's Auxiliary to the Texas Medical Association, and Mrs. D. E. Packard, Kerrville, president of the Woman's Auxiliary to Kerr-Kendall-Gillespie-Bandera Counties Medical Society, were honored at the October 10 meeting of the latter group at the home of Mrs. Sam E. Thompson, Kerrville. Twenty-two members, wives of the local dentists, and the school nurse also were present.

Mrs. Robinson discussed the national and state objectives of the auxiliary and told how each is influenced by public opinion. Mrs. Roger Stevenson, Kerrville, third vice-president, announced that the auxiliary will sponsor the showing of a motion picture on self detection of cancer before the various women's groups in Kerr County. Mrs. Thompson reviewed the accomplishments of the auxiliary for the past year, pointing out that blue ribbon awards were received for endorsements, the yearbook, and a scrapbook. She indicated that the auxiliary will sell tuberculosis seals again this year. The plans which the public schools have for detecting tuberculosis among the students were outlined by the school nurse, Mrs. Franke.

Mrs. Russell E. Guill, Kerrville, was elected secretary to replace Mrs. William Hentel, Legion, who had moved away since her election in the spring.

Mrs. David McCullough, Kerrville, led the collect, and Mrs. Packard presided over the business session, which was followed by a social hour.—Mrs. Russell E. Guill, Secretary.

Officers of the Woman's Auxiliary to the Texas Medical Association: President, Mrs. O. W. Robinson, Paris; President-Elect, Mrs. Robert F. Thompson, El Paso; First Vice-President (Organization), Mrs. V. M. Longmire, Temple; Second Vice-President (Physical Examinations), Mrs. John H. Wootters, Houston; Third Vice-President (Today's Health), Mrs. R. T. Travis, Jacksonville; Fourth Vice-President (Program), Mrs. Cecil O. Patterson, Dallas; Recording Secretary, Mrs. E. W. Coyle, San Antonio; Treasurer, Mrs. John D. Gleckler, Denison; Corresponding Secretary, Mrs. Clarence E. Gilmore, Paris; Publicity Secretary, Mrs. A. H. Neighbors, Sr., Austin; Parliamentarian, Mrs. T. Herbert Thomason, Fort Worth.

Lamar County Auxiliary

Lamar County Auxiliary honored one of its members, Mrs. O. W. Robinson, Paris, President of the State Auxiliary, at its opening meeting for the year. A luncheon October 4 in Paris was the occasion; twenty-three members were present.

Mrs. Robinson spoke on public relations, stressing her own motto of "individual service" and the need for cooperation in civil defense plans. A brass log bucket was presented to her by Mrs. George Woodfin on behalf of the auxiliary.

Yearbooks were distributed by Mrs. C. D. Barker, program chairman; Mrs. Scott Hammond was appointed civil defense chairman and Mrs. R. L. Lewis public relations chairman.

Mrs. Hammond and Mrs. N. L. Barker had charge of decorations. Mrs. C. E. Gilmore, president, presided.—Mrs. W. L. Kelley.

Navarro County Auxiliary

A talk on "Cancer and the Importance of Early Examination" was presented by Dr. J. W. David, Corsicana, when the Navarro County Auxiliary met October 5 in the home of Mrs. C. L. Gary, Jr., Corsicana. Dr. David showed a movie entitled "Self Examination of the Breast." After a routine business session light refreshments were served.—Mrs. S. H. Burnett, Secretary.

Orange County Auxiliary

Typed instructions for each committee chairman were distributed by Mrs. Leo J. Peters, Jr., Orange, president of the Orange County Auxiliary, when the group held its October 9 meeting in the home of Mrs. C. M. Covington, Orange. Mrs. Covington, district council woman, gave a report of the State Executive Board meeting held September 26. Announcement was made that nurse recruitment will be the emphasis of the local group this year.

The Rev. Herman T. Morgan, pastor of the First Methodist Church, spoke on "Religion in the Home," stressing the importance of making religion a natural, daily experience in the home.

Nineteen members and their guests were served refreshments by Mrs. Covington and Mrs. J. K. Walsh.—Mrs. T. O. Woolley.

Tom Green-Eight County Auxiliary

Main project of the Tom Green-Eight County Auxiliary this year is providing file clerks from its membership for Tom Green County's newly organized indigent clinic. The clinic, operated five afternoons each week, is staffed by members of the Tom Green-Eight County Medical Society who have volunteered their services. The physicians also donate drug samples, which are collected by auxiliary members each month, taken to the clinic, and sorted.

This project and other activities were discussed by committee chairmen when the auxiliary was entertained at a coffee September 11 in San Angelo by Mrs. Perry Byars, president. Mrs. Scott Martin, council woman for District 4, was named to head a committee to investigate the feasibility of conducting a nurse recruitment campaign.

A seated tea and book review was attended by about seventy-five members and guests of the Tom Green-Eight County Auxiliary at the home of Mrs. Carl Kunath, San Angelo, October 2. Mrs. T. D. Young, wife of a Sweetwater physician, reviewed Rumer Goddens' "A Breath of Air."

Mrs. Perry Byars presided at the coffee service, and Mrs. Lloyd Hershberger served punch. Hostesses with Mrs. Kunath were Mesdames Francis M. Spencer, Fredric E. Simpson, Lewis K. Tester, John D. McDaniel, and Marian L. Wood.—Mrs. Victor E. Schulze, Publicity Secretary.

AUXILIARY DEATHS

Mrs. Charles B. Alexander, San Antonio, twenty-eighth President of the Woman's Auxiliary to the Texas Medical Association, died August 18, 1951.

Mrs. Alexander, formerly head of the English department at Ball High School, Galveston, had served as public relations and Bulletin chairman of the State Auxiliary and in 1945 was elected President. Other offices held by Mrs. Alexander were president of Bexar County Medical Auxiliary, president of Augusta Literary Club, president of Woodlawn Parent-Teachers Association, vice-president of City Federation of Women's Clubs, and vice-president and director of the Auxiliary to the San Antonio Home and Hospital for Unwed Mothers. She was a member of the Presbyterian Church and served on the nurses recruiting and disaster committees of the American Red Cross.

Mrs. Alexander was from a family of medical men, her grandfather, father, husband, and father-in-law being physicians. Survivors are her husband, Dr. Alexander, and a daughter, Mary Olney, San Antonio, and one brother, Hugh C. Cunningham, Beaumont.

MRS. CHARLES B. ALEXANDER

Miss Sarah Manhoff, San Antonio, Texas, associate member of Bexar County Auxiliary, died September 19, 1951. She was a member of the Optimisses Club, Circle of the Delphians, Eastern Star, and Daughters of the Nile. She is survived by two brothers, Dr. L. J. Manhoff, San Antonio, and Dr. Ben Manhoff, Jacksonville, Fla.

DEATHS

J. GILBERT

Dr. Joseph Gilbert, Austin, Texas, President of the Texas Medical Association for the year 1927-1928 and founder of the University of Texas Health Service, died October 11, 1951, of myocardial failure.

Dr. Gilbert, the son of George and Mandana (Hornsby) Gilbert, was born May 8, 1873, at Hornsby Bend near Austin, the great grandson of Reuben Hornsby, who was the first white settler in Travis County and holder of a land grant from Stephen F. Austin. His early education was obtained at Hornsby Bend and Austin. He then was graduated from Texas Agricultural and Mechanical College in 1894 and the Medical Department of the University of Texas in 1897. He practiced for a short period at Bastrop and Hornsby Bend before moving to Austin in 1898. In 1902 he was appointed surgeon of the State Confederate Home and in 1904 health officer for Austin and Travis County. In addition, he did general practice in Austin until 1906, when he went to Bryan as physician for Texas A. and M. College for two years. He returned to Austin, where he was active until 1946, specializing in surgery after 1914. During his career he did postgraduate work in New York, Boston, Rochester, Minn., Canada, and Europe.

The University of Texas played a big part in Dr. Gilbert's career and affections. He was asked in 1909 to inaugurate a students health care service, and from that time until his retirement in 1946 he served as director of the Health Service with the exception of a ten year period when a full-time director was employed and Dr. Gilbert served as consultant. The accompanying photograph was made at the request of the Health Service staff so that a life-size oil portrait might be painted from it to hang in the recently

An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

occupied new Health Service building. He also served as physician for the University athletic teams, and received a gold football and later a watch in recognition of his ministrations to the teams. He was a member of the council of the Ex-Students Association for a number of years.

Professional organizations were strongly supported by Dr. Gilbert, who was a member of Travis County Medical Society, Texas Medical Association, and American Medical

DR. JOE GILBERT

Association throughout his career. He was both secretary and president of the county group. He was councilor of the Seventh District from 1920 to 1926, when he was elected to the presidency of the state organization. In 1948 he was elected to honorary membership in the state association, and in 1950 to emeritus membership. He was secretary of the Section on Obstetrics and Gynecology in 1917, and he was delegate to the American Medical Association for several years. He was made a fellow in the American College of Surgeons in 1914 and was a member of the Texas Surgical Society. He helped to found St. David's Hospital, and was a member of the staff there and at Seton Hospital. He served on Selective Service examining boards during both world wars, and was a member of the State Board of Health in the 1920's. He was a member of the Episcopal Church, Scottish Rite, and Shrine.

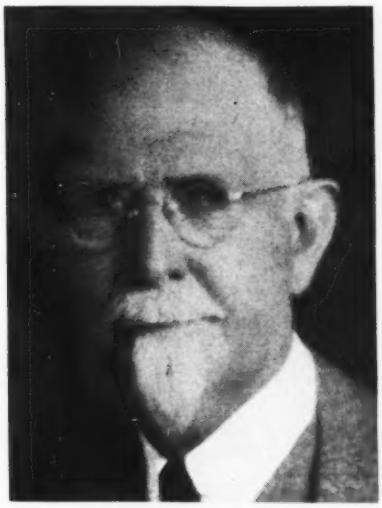
Dr. Gilbert met Miss Daisy Thorne in Galveston during his medical school days. Immediately after the disastrous flood in 1900 he made his way to Galveston, found his fiancée, and married her September 13 in the first marriage ceremony performed after the flood. He is survived by Mrs. Gilbert; one son, Dr. Joe Thorne Gilbert, Austin; two daughters, Mrs. James B. Marley, Austin, and Mrs. J. T. Davis, Waco; and one brother, W. R. Gilbert, Dallas.

J. A. KYLE

Dr. J. Allen Kyle, Houston, Texas, died in a Houston hospital September 1, 1951.

Born February 25, 1871, in Fincastle, Va., Dr. Kyle was the son of John William and Charlotte Penelope (Biggs) Kyle. He received his high school education in Victoria and was graduated in 1890 from Texas Agricultural and Mechanical College, College Station, receiving a bachelor of science degree. In 1894 Dr. Kyle received his medical degree from the Medical Department of Columbia College, after which he interned two years at St. Vincent's Hospital, New York. Since 1896, Dr. Kyle had practiced in Houston. During the Spanish-American War and World War I he served in the Army Medical Corps. Dr. Kyle, realizing the need for a city-county charity hospital, aided in laying the groundwork for Jefferson Davis Hospital, and with six other physicians, was honored in 1940 at a testimonial dinner for this service to the city of Houston. Dr. Kyle served as chief of staff at Jefferson Davis Hospital; was emeritus consultant at Jefferson Davis and Hermann Hospitals; and was emeritus clinical professor of surgery at Baylor University College of Medicine. He had the distinction of having practiced in Houston continuously longer than any other physician.

Dr. Kyle held membership for many years in the American Medical Association and Texas Medical Association through Harris County Medical Society, having been the society's president in 1932. He was active in the affairs of



DR. J. ALLEN KYLE

the state organization, being most recently a member of the Committee on Legislation. He was one of the founders of the Houston Academy of Medicine and a life member of the Postgraduate Medical Assembly of South Texas. During his term of office on the Texas State Board of Medical Examiners in the 1930's, Dr. Kyle served as chairman of member of the City Planning Commission of Houston for ten years; chairman of the board of directors of the Houston that group. He helped organize the Houston chapter of the Red Cross and was chairman of the physicians' division of the Harris County War Chest campaign. A fellow of the American College of Surgeons, Dr. Kyle likewise held membership in Southern Medical Association, Texas Surgical Society, and Alpha Kappa Kappa medical fraternity. He was a member of the board of regents of Texas Agricultural and Mechanical College from 1911 until 1915; a First Federal Savings and Loan Association; vice-president, director, and chairman of the auditing committee of the Houston National Bank; an honorary life member of the Elks; and a member of the Knights of Pythias, the Presbyterian Church, and the Houston Club.

On February 12, 1901, in Houston, Dr. Kyle married Miss Mary Stella Carr, who survives. Other survivors are

one son, William Allen Kyle, Houston; a sister, Mrs. J. C. West, Nursery; and two grandchildren.

V. H. WILLIAMS

Dr. Victor Hugo Williams, San Antonio, Texas, died at his residence September 11, 1951, of coronary occlusion.

Born March 9, 1878, at Townley, Ala., Dr. Williams was the son of James M. and Alabama (Carmichael) Williams. He received his preliminary education in the public schools in Alabama and attended George Peabody College for Teachers and the University of Nashville, receiving a bachelor of science degree from the latter in 1904. He received his medical degree from the Medical Department of the University of Alabama in 1908, interned at Hillman Hospital, Birmingham, and later took postgraduate work in New York. Dr. Williams practiced in Calera and Jasper, Ala., and West Point, Ga., before moving to San Antonio,

DR. VICTOR H. WILLIAMS

where he had practiced for twenty-four years. During World War I he volunteered for service and as a captain in the Medical Corps of the Army was assigned to the surgical department of a base hospital at Mars, France.

A member of the Texas Medical Association and the American Medical Association through Bexar County Medical Society, Dr. Williams also held membership in his early days of practice in the county and state medical societies of Alabama and Georgia. He served as vice-president of the Alabama State Medical Association from 1924 until 1927, as president of the Fourth District Medical Association of Alabama, and as secretary-treasurer of Walker County (Ala.) Medical Society from 1925 until 1927. He also was a member of the Southern Medical Association.

Through Dr. Williams' efforts, the Walker County Hospital in Jasper was built. He served as staff member of this hospital until he moved to San Antonio in 1927. Dr. Williams also was on the Jasper School Board. In San Antonio he served for many years on the staff of Santa Rosa Hospital. He was past chaplain of the Alamo Heights Lions Club, a past commander of Post 10 of the American Legion, and a member of the Methodist Church. Dr. Williams had served as a steward in the Methodist Church since he was 17 years old.

On June 25, 1908, Dr. Williams married Miss Arpatia Wilson at Monticello, Ark. Surviving are his wife and sons, Will James Williams, chief boatswain's mate, Jacksonville, Fla.; and MacWilson Williams, Corpus Christi; a brother, John H. Williams, Ensley, Ala.; and four sisters, Mrs. H. D. Harris and Mrs. Pearl Larkin, Birmingham; and Mrs. W. H. Hubbard and Mrs. Flauda Oliver, Jasper, Ala.

W. B. EVERITT

Dr. W. B. Everitt, Sterling City, Texas, who combined the practice of medicine with preaching the gospel, died September 29, 1951, from acute cholecystitis.

Born July 4, 1867, in Quitman, Miss., Dr. Everitt as a small child moved with his parents, Mr. and Mrs. Will Everitt, to Texas, where he was reared on a farm in San Jacinto County. After teaching school several years at Red Rock, he was graduated from the Hospital College of Medi-

DR. W. B. EVERITT

cine, Louisville, Ky., in 1890 and later did postgraduate work at Tulane University, New Orleans. He began practice in Shepherd and lived in Corsicana, Livingston, Goldthwaite, Brownwood, Hamilton, Cleveland, and Fostoria, before moving finally to Sterling City. In each place he not only practiced medicine but also served as pastor of the Baptist Church. At the time of his death, Dr. Everitt had practiced medicine sixty-two years and preached thirty-seven years.

An honorary member of the Texas Medical Association since 1937, Dr. Everitt throughout his medical career was a member of the Texas Medical Association and American Medical Association through the county society in the area where he lived. In recent years he had been a member of the Tom Green-Eight County Medical Society, of which he was president in 1934. He was local surgeon for the Santa Fe Railroad more than thirty years and was known as an authority on snakebite treatment. He helped organize the Sterling City Lions Club and later was its president. He had been a member of the Masonic Lodge for many years.

Surviving Dr. Everitt are his wife, the former Miss Ruby K. Hare, whom he married April 4, 1901, in Shepherd, and two sons, Clyde Everitt, Sterling City, and Herman Everitt, Odessa; three grandchildren; and two great grandchildren. Dr. Everitt delivered both his sons, converted them, baptized them, raised them to the degree of Master Mason, performed their marriage ceremonies, and delivered their children.

C. L. MILBURN

Dr. Conn Lewis Milburn, San Antonio, Texas, died August 8, 1951, in a San Antonio hospital.

Born in Unionville, Mo., September 20, 1876, Dr. Milburn attended the old Main Avenue High School in San Antonio and was a member of the school's first football team. He was a graduate in pharmacy of the University of Texas, Austin, and was graduated in 1905 from the University of Texas Medical Branch, where he was a demonstrator in chemistry. He had practiced medicine since 1905 in San

DR. CONN L. MILBURN

Antonio, where he operated the Central Clinic and was chairman of the San Antonio Board of Health.

Dr. Milburn was a member for many years of the Texas Medical Association and American Medical Association through Bexar County Medical Society, of which he had been president and vice-president. He served as a member of the Council on Medical Education and Hospitals of the state Association at the time of his death. A member of Fifth District Medical Society and a fellow of the American College of Surgeons, Dr. Milburn held membership in Phi Alpha Sigma fraternity, Alpha Omega Alpha honorary medical fraternity, Kiwanis Club, San Antonio Country Club, Order of the Alamo, Masonic Lodge, San Antonio Consistory, Alzafar Shrine Temple, and Knights Templar.

Dr. Milburn married Miss Mary E. Abbott on September 10, 1901, in Naples, Ill. He is survived by his wife; six sons, Dr. Kennedy Milburn, Dr. Graham B. Milburn, Philip M. Milburn, and Malcolm L. Milburn, San Antonio; Col. Conn L. Milburn, Jr., San Francisco; and John D. Milburn, Houston; two daughters, Mrs. W. W. White, New York; and Mrs. Carlisle Maxwell, San Antonio; and seventeen grandchildren.

H. B. MACEY

Dr. Harry Buford Macey, Temple, Texas, died August 5, 1951, of arteriosclerotic heart disease with myocardial infarction.

The son of Mr. and Mrs. Buford Macey, Dr. Macey was born July 9, 1905, in Lebanon, Tenn., and received his academic education at Vanderbilt University and Cumberland University, receiving a bachelor of arts degree from the latter in 1926. In 1930 he was graduated from the University of Tennessee College of Medicine. Dr. Macey interned at New York Poly-Clinic Hospital and received a fellowship in orthopedics at the Willis C. Campbell Clinic, Memphis, where he studied from 1932 until 1934. He served as first assistant to Dr. Melvin Henderson, Mayo Clinic, in 1934 and 1935, and was a member of the permanent staff of Mayo Clinic from 1935 until 1946. For the past five years, Dr. Macey was chief of service of the Department of Orthopedic and Traumatic Surgery of Scott and White Clinic, Temple. During World War II, Dr. Macey served in the United States Navy as chief of Orthopedic Service of the naval hospitals at Corona, Calif., and Annapolis.

A member of the American Medical Association and Texas Medical Association through Bell County Medical Society, Dr. Macey held membership in the Twelfth District

DR. HARRY B. MACEY

Medical Society, Texas Surgical Society, and Southwestern Surgical Society; he was a fellow of the American College of Surgeons. Also he was affiliated with the American Orthopedic Association, American Academy of Orthopedics, and Clinical Orthopedic Society, and was a diplomate of the American Board of Orthopedic Surgery. Dr. Macey was a Presbyterian and a Rotarian.

In Memphis on September 2, 1930, he married Miss Virginia St. John, who survives. Dr. Macey also is survived by his three sons, Harry Buford Macey, Jr., Joe St. John Macey, and Michael Carter Macey; and his mother, Mrs. Pearl Macey, Lebanon, Tenn.

C. L. O'QUINN

Dr. Columbus Lafayette O'Quinn, physician at Weesatche for fifty years, died August 15, 1951, in a Cuero, Texas, hospital from cardiovascular disease and carcinoma of the prostate.

Born December 3, 1867, in Orla, Mo., Dr. O'Quinn was the son of George Marion and Caroline O'Quinn. He received his early education in the public schools and was graduated in medicine from Tulane University, New Orleans, in 1901. He began practice in Weesatche and was active there until his last illness.

Throughout most of his professional career, Dr. O'Quinn

was a member of the American and Texas Medical Associations through the Goliad and then the DeWitt County Medical Society. He was president of the DeWitt organization in 1936.

Survivors include three brothers, Albert and Luther O'Quinn, San Angelo, and Nathaniel O'Quinn, Miles, and three sisters, Mrs. Walter Weatherby, Goldthwaite; Mrs. Lura Bethel, Mountainair, N. Mex.; and Mrs. Delia Armstrong, Ringold, Okla.

R. B. TRIGG

Dr. Ross Beckham Trigg, Fort Worth, Texas, died August 7, 1951, of cerebral hemorrhage in a Fort Worth hospital.

Born July 27, 1885, in Arlington to Daniel C. and Sarah (Bowlin) Trigg, Dr. Trigg attended Fort Worth public schools and was graduated in 1908 from Fort Worth School of Medicine. He took additional training in Chicago and at Jefferson Medical College, Philadelphia. Dr. Trigg was engaged in the practice of industrial surgery with his brother, Dr. Henry Trigg, until the latter's death in 1946. In 1950

DR. ROSS B. TRIGG

Dr. Trigg discontinued active practice because of ill health. Dr. Trigg was a captain in the State Guard during World War II.

A member of the Texas Medical Association and the American Medical Association for many years through Tarrant County Medical Society, Dr. Trigg was elected to honorary membership in the state association this year. He was a fellow of the American College of Surgeons and for twenty-five years served as secretary-treasurer of the Texas Railway and Traumatic Surgical Association. He was a charter member of Masonic Lodge 148 and a Shriner, and held membership in the Fort Worth Club and Colonial Country Club. Dr. Trigg was a charter member and past president of the Fort Worth Exchange Club. His other interests included hunting, fishing, and ranching.

On December 24, 1930, in Fort Worth he married Miss Lois Olita Russell, who survives, as do two daughters, Bobbie Ann Trigg and Margaret Jane Trigg of Fort Worth. Dr. Trigg also is survived by a brother, Dr. Dan Trigg, Tucumcari, N. Mex.; and four sisters, Mrs. Margaret T. Boyle, Mrs. Eppie T. Robinson, Mrs. Zeta T. Riker, and Miss Mary Trigg, Fort Worth.

W. L. RHODES

Dr. William Lemuel Rhodes, Corpus Christi, Texas, died July 30, 1951, following a heart attack.

The son of William Allen and Martha (Brown) Rhodes, Dr. Rhodes was born December 5, 1883, in Kansas City, Kan., where he received his early education. He attended the University of Kansas and was graduated from the University Medical College of Kansas City in 1909. He served an internship at the Illinois Eye and Ear Infirmary, Chicago, where he also later did postgraduate work. Dr. Rhodes took additional postgraduate work in Vienna and at the New

DR. WILLIAM L. RHODES

York Post Graduate School of Medicine during his career. Employed first as associate ophthalmologist at the University of Kansas School of Medicine, Lawrence, Dr. Rhodes left Kansas for service in World War I. He was commissioned a first lieutenant in the Army Medical Corps and organized and commanded the 140th Ambulance Company, Thirty-Fifth Division in France, serving as a captain. After the war Dr. Rhodes practiced two years in Burkburnett and several in Wichita Falls and Vernon before moving in 1929 to Corpus Christi. From 1933 to 1936 he was dean of the School of Nursing at Spohn Hospital.

Dr. Rhodes was a member of the Texas and American Medical Association successively through Wichita, Wilbarger, and Nueces Counties Medical Societies. He was secretary of the Nueces organization in 1936. He was a member of the Southern Medical Association, the old Southwest Medical Association, American Medical Association of Vienna, and Nueces County Eye, Ear, Nose, and Throat Society. Dr. Rhodes was a fellow of the International College of Surgeons and a charter member of its eye, ear, nose, and throat division. He was a member of the Optimist Club, Masonic order, Scottish Rite and Shrine, American Legion (serving as post commander for three terms), Corpus Christi Country Club, and Corpus Christi Yacht and Boating Club. He was author of numerous articles on sinus disease and allergy.

Surviving Dr. Rhodes are his wife, the former Miss Lorena Parrott, whom he married in Corpus Christi in 1945; two sons, William Robert Rhodes, Corpus Christi, and John Paul Rhodes, Bellaire; one sister, Mrs. George Boden, Kansas City, Mo.; and four grandchildren.